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Bulletin of  
The University of Minnesota  
THE COLLEGE OF EDUCATION

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VOL. XVIII, No. 13, SEPTEMBER 1915

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The Bulletin of the University of Minnesota is issued as often as twice a month during the university year.

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# Bulletin of The University of Minnesota

## THE COLLEGE OF EDUCATION

1915-1916



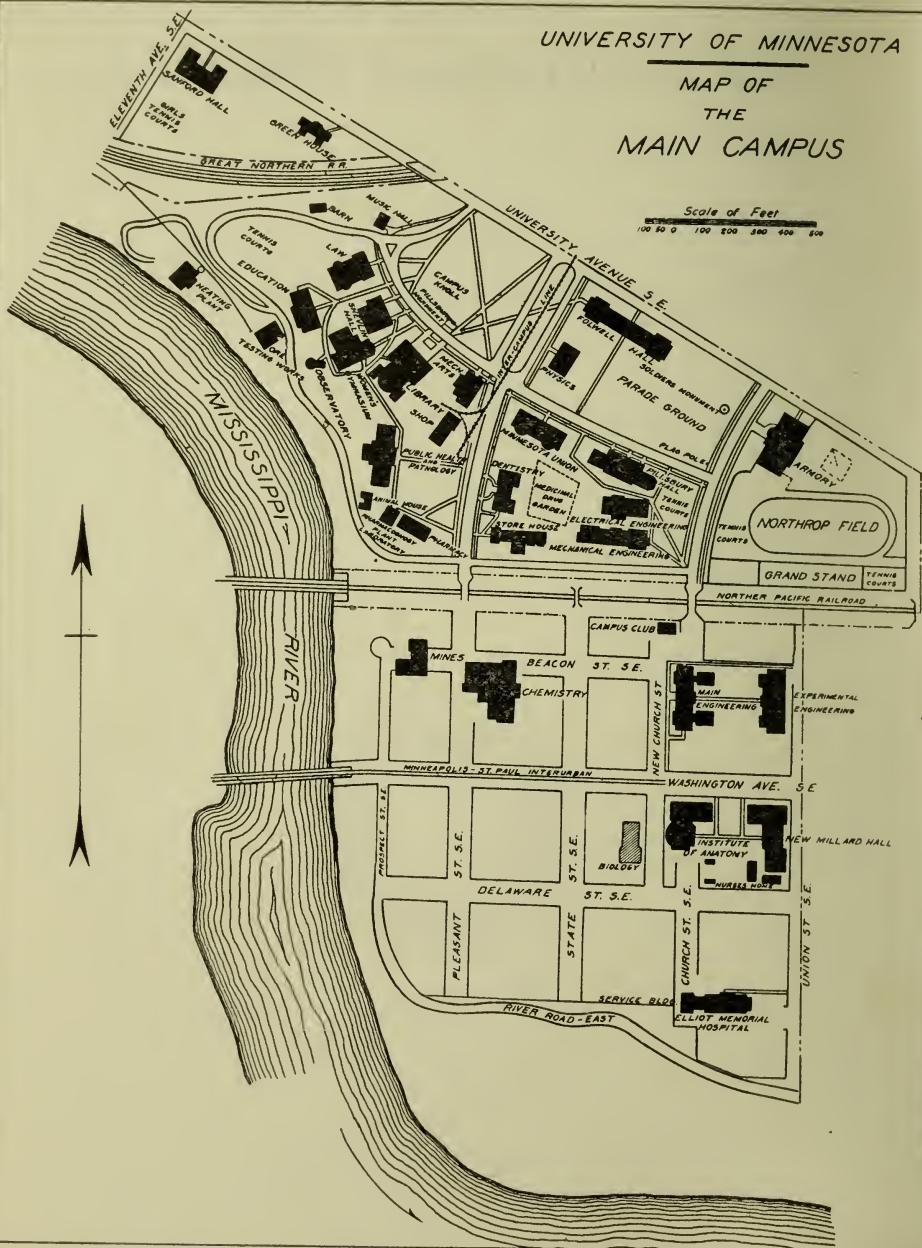
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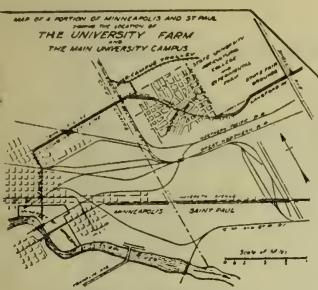
UNIVERSITY OF MINNESOTA

MAP OF  
THE  
MAIN CAMPUS

Scale of Feet  
100 50 0 100 200 300 400 500



Area of Main Campus, 108.5 acres



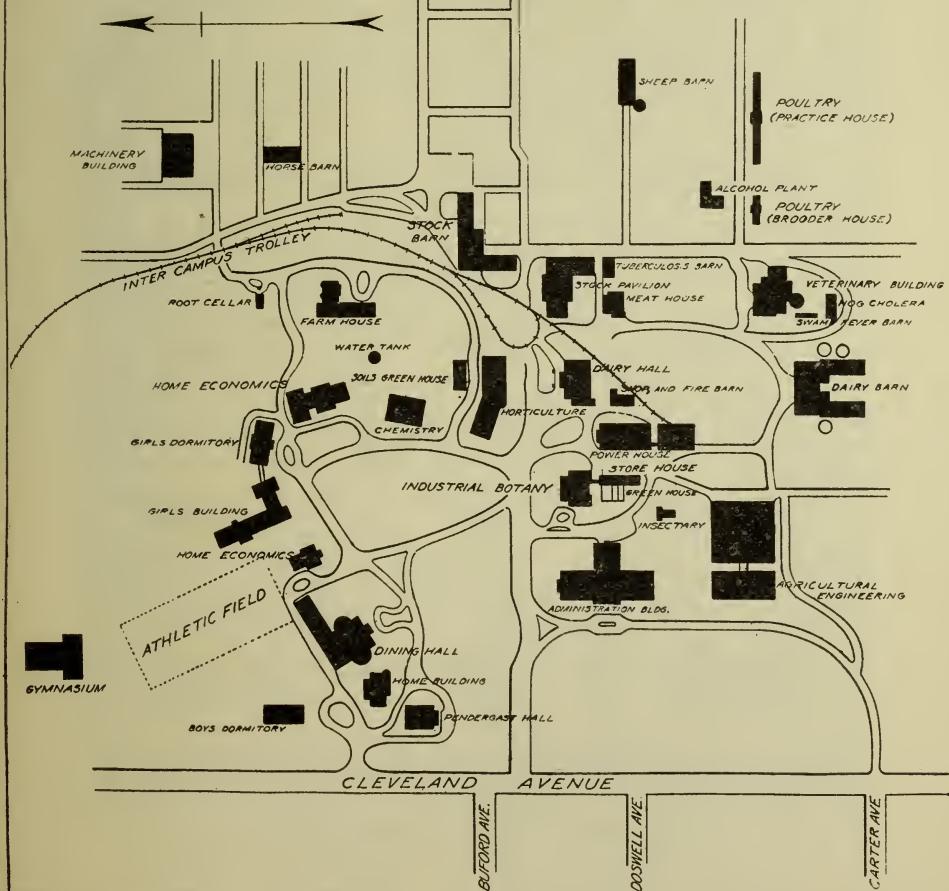
## UNIVERSITY OF MINNESOTA

### MAP OF THE CAMPUS OF THE

### UNIVERSITY FARM

Scale of Feet

100 50 0 100 200 300 400 500



O. Szelmer.

Area of University Farm, 422.56 acres

1915							1916							1917						
JULY							JANUARY							JULY						
Su	Mo	Tu	W	Th	Fr	Sa	Su	Mo	Tu	W	Th	Fr	Sa	Su	Mo	Tu	W	Th	Fr	Sa
..	..	..	..	1	2	3	..	..	..	..	..	..	1	..	..	..	..	..	..	1
4	5	6	7	8	9	10	2	3	4	5	6	7	8	2	3	4	5	6	7	8
11	12	13	14	15	16	17	9	10	11	12	13	14	15	9	10	11	12	13	14	15
18	19	20	21	22	23	24	16	17	18	19	20	21	22	16	17	18	19	20	21	22
25	26	27	28	29	30	31	23	24	25	26	27	28	29	23	24	25	26	27	28	29
..	..	..	..	..	..	..	30	31	..	..	..	..	..	30	31	..	..	..	..	..
AUGUST							FEBRUARY							AUGUST						
1	2	3	4	5	6	7	..	..	1	2	3	4	5	..	..	1	2	3	4	5
8	9	10	11	12	13	14	6	7	8	9	10	11	12	9	10	11	12	13	14	15
15	16	17	18	19	20	21	13	14	15	16	17	18	19	13	14	15	16	17	18	19
22	23	24	25	26	27	28	20	21	22	23	24	25	26	20	21	22	23	24	25	26
29	30	31	..	..	..	..	27	28	29	..	..	..	..	27	28	29	30	31	..	..
SEPTEMBER							MARCH							SEPTEMBER						
..	..	..	1	2	3	4	..	..	..	1	2	3	4	..	..	..	1	2	3	4
5	6	7	8	9	10	11	5	6	7	8	9	10	11	3	4	5	6	7	8	9
12	13	14	15	16	17	18	12	13	14	15	16	17	18	10	11	12	13	14	15	16
19	20	21	22	23	24	25	19	20	21	22	23	24	25	17	18	19	20	21	22	23
26	27	28	29	30	..	..	26	27	28	29	30	31	..	24	25	26	27	28	29	30
OCTOBER							APRIL							OCTOBER						
..	..	4	5	6	7	1	2	3	4	5	6	7	1	1	2	3	4	5	6	
3	4	5	6	7	8	9	2	3	4	5	6	7	8	8	9	10	11	12	13	14
10	11	12	13	14	15	16	9	10	11	12	13	14	15	15	16	17	18	19	20	21
17	18	19	20	21	22	23	16	17	18	19	20	21	22	22	23	24	25	26	27	28
24	25	26	27	28	29	30	23	24	25	26	27	28	29	30	31	..	..	..	..	..
NOVEMBER							MAY							NOVEMBER						
..	1	2	3	4	5	6	..	1	2	3	4	5	6	..	..	1	2	3	4	5
7	8	9	10	11	12	13	7	8	9	10	11	12	13	5	6	7	8	9	10	11
14	15	16	17	18	19	20	14	15	16	17	18	19	20	12	13	14	15	16	17	18
21	22	23	24	25	26	27	21	22	23	24	25	26	27	19	20	21	22	23	24	25
28	29	30	..	..	..	..	28	29	30	31	..	..	..	26	27	28	29	30	..	..
DECEMBER							JUNE							DECEMBER						
..	..	..	1	2	3	4	..	..	..	..	1	2	3	..	..	..	..	1	2	3
5	6	7	8	9	10	11	4	5	6	7	8	9	10	3	4	5	6	7	8	9
12	13	14	15	16	17	18	11	12	13	14	15	16	17	10	11	12	13	14	15	16
19	20	21	22	23	24	25	18	19	20	21	22	23	24	17	18	19	20	21	22	23
26	27	28	29	30	31	..	25	26	27	28	29	30	..	24	25	26	27	28	29	30

## UNIVERSITY CALENDAR

### 1915-16

The university year covers a period of thirty-eight weeks, beginning on the Tuesday before the second Thursday in September. Commencement Day is always the second Thursday in June.

1915			
August	31	Tuesday	Registration closes except for new students
September	1-8	Week	Fees payable except for new students
September	7-14	Week	Examinations for the removal of conditions (except Colleges of Agriculture and Forestry), entrance examinations, registration of new students, and payment of fees
September	15	Wednesday	First semester begins
September	27	Monday	Agricultural College, farm experience examination
October	4	Monday	School of Agriculture, first term begins
October	7	Thursday	Senate meeting, 4:00 p.m.
November	8	Monday	Dairy School opens
November	24	Wednesday	Thanksgiving recess begins 9:00 p.m.
November	29	Monday	Thanksgiving recess ends 8:00 a.m.
Nov. 29 to Dec. 4	Week		Second semester condition examinations, Colleges of Agriculture and Forestry
December	2	Thursday	Senate meeting, 4:00 p.m.
December	6-11	Week	Short course for ice-cream makers
December	11	Saturday	Dairy School closes
December	17	Friday	Christmas vacation begins 9:00 p.m.
December	17	Friday	School of Agriculture, first term closes
1916			
January	3-8	Week	Farmers' Short Course
January	4	Tuesday	Christmas vacation ends 8:00 a.m.
January	18	Tuesday	Registration for second semester closes
January	21	Tuesday	School of Agriculture, second term begins
January	24	Monday	Final examinations begin
January	25	Tuesday	Payment of fees for second semester closes
February	2	Wednesday	Second semester begins
February	3	Thursday	Senate meeting, 4:00 p.m.
February	12	Saturday	Lincoln's Birthday: a holiday
February	22	Tuesday	Washington's Birthday: a holiday

March	30	Wednesday	School of Agriculture closes
April	3-8	Week	Junior Short Course
April	19	Wednesday	Easter recess begins 9:00 p.m.
April	19-22		Superintendents' and Principals' Short Course
April	27	Thursday	Easter recess ends 8:00 a.m.
May	1-6	Week	Condition examinations in certain colleges
May	2	Tuesday	Traction Engineering Course begins
May	4	Thursday	Senate meeting, 4:00 p.m.
May	26	Friday	Final examinations begin
May	30	Tuesday	Memorial Day: a holiday
June	1-8	Week	Military Encampment, Fort Snelling
June	3	Saturday	Second semester closes
June	4	Sunday	Baccalaureate service
June	5	Monday	Senior class day exercises
June	7	Wednesday	Alumni Day
June	8	Thursday	Forty-fourth Annual Commencement
June	9	Friday	Summer vacation begins
June	12	Monday	Summer Session begins

The university year for 1916-17 will begin Tuesday, September 12.

# THE COLLEGE OF EDUCATION

## FACULTY

GEORGE EDGAR VINCENT, Ph.D., LL.D., President	1005 5th St. S. E.
CYRUS NORTHROP, LL.D., President Emeritus	510 10th Ave. S. E.
LOTUS D. COFFMAN, Ph.D., Dean and Professor of Education	1115 E. River Road
EDWARD E. NICHOLSON, M.A., Chairman of Joint Administrative Board	914 7th St. S. E.
GEORGE N. BAUER, Ph.D., Professor of Mathematics	2176 Scudder Ave., St. Paul
JOSEPHINE T. BERRY, M.A., Professor of Nutrition	1206 7th St. S. E.
GISLE BOTHNE, M.A., Professor of Scandinavian Languages	508 5th Ave. S.E.
FREDERIC EDWARD CLEMENTS, Ph.D., Professor of Botany	424 Harvard St. S. E.
LOUIS JOSEPH COOKE, M.D., Director of Physical Education for Men	909 6th St. S. E.
HARDIN CRAIG, Ph.D., Professor of English	2725 Humboldt Ave. S.
WILLIAM H. EMMONS, Ph.D., Professor of Geology	719 7th St. S. E.
HENRY A. ERIKSON, Ph.D., Professor of Physics	525 E. River Road
GEORGE B. FRANKFORTER, Ph.D., Professor of Chemistry	415 Walnut St. S. E.
JOHN HENRY GRAY, Ph.D., Professor of Economics	M. E. HAGGERTY, Ph.D., Professor of Educational Psychology
JOHN CORRIN HUTCHINSON, B.A., Professor of Greek	3806 Blaisdell Av. S.
ALBERT ERNEST JENKS, Ph.D., Professor of Anthropology	812 4th St. S. E.
RAYMOND A. KENT, M.A., Assistant Professor of Education and Principal	of the University High School
DAVID L. KIEHLE, LL.D., Professor of Education, Emeritus	828 University Ave. S. E.
FREDERICK KLAEBER, Ph.D., Professor of Comparative Philology	226 58th St. E., Portland, Oregon
WILLIAM H. KIRCHNER, B.S., Professor of Drawing and Descriptive	619 9th Av. S. E.
Geometry	722 10th Ave. S. E.
AUGUST C. KREY, Ph.D., Assistant Professor of History	1201 7th St. S. E.
FRANCIS P. LEAVENWORTH, M.A., Professor of Astronomy	317 17th Ave. S. E.
WINFORD P. LARSON, M.D., Assistant Professor of Bacteriology	614 9th Ave. S. E.
J. ANNA NORRIS, M.D., Director of Health and Physical Education for	1005 University Ave. S. E.
Women	2727 Lake of the Isles Blvd
EVERETT WARD OLMSTED, Ph.D., Professor of Romance Languages	

JOSEPH B. PIKE, M.A., Professor of Latin	1025 6th St. S. E.
CHESSLEY JUSTIN POSEY, M.S., Assistant Professor of Geography	1627 Melbourne Ave. S. E.
ALBERT W. RANKIN, B.A., Professor of Education	916 5th St. S. E.
WILLIAM A. SCHAPER, Ph.D., Professor of Political Science	615 Fulton St. S. E.
CARL SCHLENKER, B.A., Professor of German	514 11th Ave. S. E.
CARLYLE SCOTT, Professor of Music	3322 Lyndale Ave. S.
CHARLES P. SIGERFOOS, Ph.D., Professor of Zoology	1023 University Ave.
ANDREW A. STOMBERG, M.S., Professor of Scandinavian Languages	531 Walnut St. S. E.
ASHLEY V. STORM, M.A., Professor of Agricultural Education	1827 4th St. S. E.
FLETCHER HARPER SWIFT, Ph.D., Professor of Education	1910 4th St. S. E.
JOSEPH M. THOMAS, Ph.D., Professor of Rhetoric	
ALBERT BEEBE WHITE, Ph.D., Professor of History	325 6th Ave. S. E.
NORMAN WILDE, Ph.D., Professor of Philosophy	901 6th St. S. E.

## INSTRUCTORS

LILLIAN COHEN, Ph.D., Instructor in Chemistry	415 E. 14th St.
REWEY BELLE INGLIS, B.A., Instructor in Methods of Teaching High School English	2436 Bryant Ave. S.
JAMES W. NORMAN, M.A., Instructor in Education	
WILLIAM D. REEVE, B.S., Instructor in Methods of Teaching High School Mathematics	
THEOPHILUS H. SCHROEDEL, B.A., Instructor in German	977 14th Av. S. E.

## LECTURERS

ALBERTA ACKERMAN, Lecturer in Methods of High School Teacher Training Departments	
MABEL CARNEY, Lecturer in Methods of High School Teacher Training Departments	
MAY H. DILLS, Lecturer in Methods of High School Teacher Training Departments	
THADDEUS P. GIDDINGS, Lecturer in Public School Music	84 Spruce Place
DAVID H. HOLBROOK, Lecturer in Vocational Guidance	4051 Sheridan Ave. S.
CORAL L. OSBORN, Lecturer in Methods of High School Teacher Training Departments	
RAY L. SOUTHWORTH, M.A., Lecturer in Manual Training	3925 12th Ave. S.
JUDSON R. TOWNE, B.S., Lecturer in Methods of High School Physics	

## UNIVERSITY HIGH SCHOOL

BESSIE BEMIS, B.S., Instructor in Cooking	2101 Knapp St., St. Paul
VETTA GOLDSTEIN, Instructor in Design	2298 Priscilla St., St. Paul

REWEY BELLE INGLIS, B.A., Instructor in English 2436 Bryant Ave. S.  
RAY L. LELAND, B.S., Instructor in History  
WILLIAM D. REEVE, B.S., Instructor in Mathematics  
ELSIE M. SMITHIES, B.A., Instructor in Latin  
SOPHIA HUBMAN, M.A., Instructor in German  
CHARLES J. PIEPER, B.S., Instructor in Science  
MAUDE M. F. SCHAFER, Ph.B., Assistant Instructor in English  
JOHN A. SHOEMAKER, B.A., Assistant Instructor in Mathematics and  
Science

## GRADUATE SCHOLAR

HARRY N. FITCH, B.A.

## GENERAL INFORMATION

The College of Education, the teachers' professional college of the University, was authorized by special enactment of the Legislature of Minnesota in 1905 and was established by the Regents of the University in the following year. It prepares superintendents, principals, teachers of high-school subjects, manual training teachers, school-librarians, and teachers of high-school training departments. The preparation of teachers of home economics and agriculture is under the direction of the two respective departments of the College of Agriculture.

The College of Education and the University High School are located in the new Education Building. The University High School occupies the basement floor and all of the first floor except rooms 103 and 106, reserved for the dean. The College occupies the second floor.

### *University High School*

The primary purpose of the University High School is to give opportunity for practice teaching for prospective teachers. The maintenance of typical school conditions is assured by two facts—all work, including the practice teaching, is directly under the guidance of experienced and successful teachers, and the school, altho not eligible for state aid, has been placed under state inspection. For further information, consult Bulletin of the University High School.

### ADMISSION

Students looking forward to teaching should consult with the Dean of the College of Education or the Chairman of the Program Committee early in their course.

Not infrequently seniors discover that a slight difference in arrangement of studies in their course made during their freshman or sophomore years would have made them much more eligible for teaching positions.

Students are held responsible for arranging their courses so as to meet all requirements. To do this intelligently they should secure from the Registrar's office or the office of the Dean of the College of Education the following bulletins and pamphlets:

Bulletin of General Information

Bulletin and program of the College of Education

Bulletin and program of the College of Science, Literature, and the Arts

Bulletin of the University High School

Information for New Students

The Minnesota Code

The Minnesota Blue Book

High School Board Rules, State Department of Education, Bulletin No. 45, May, 1915

State Department of Education Bulletin No. 50, March, 1914.  
See also page 18 of this Bulletin.

#### *Regular Students*

To be admitted to regular standing in the College of Education, students must be able to satisfy either of the following requirements, (a) or (b).

(a) Completion of at least the freshman and sophomore years of the College of Science, Literature, and the Arts, or of some other approved College at the University of Minnesota or elsewhere, during which time an introductory course in general psychology shall have been pursued. No formal application is necessary for transfer from the College of Science, Literature, and the Arts to the College of Education, nor is any loss of credits involved. Students able to meet the requirements set forth above simply make known their desire at the Registrar's office at the time of registration and they will thereupon be furnished with College of Education registration cards.

(b) Graduation from an approved normal school of Minnesota or of some other state. See below under *Advanced Standing*.

#### *Unclassed Students*

Normal school graduates receiving forty-two credits, teachers preparing for examination for the First Grade Professional Certificate, but who are unable to meet the regular requirements for admission, teachers in service unable to carry full work, and certain other classes of students are admitted to the College of Education as unclassed students. Each case must, however, be dealt with individually as the result of formal application to the Dean.

Unclassed students in the College of Education will find it possible to pursue all subjects required for a First Grade Professional Certificate. Such students who receive a mark of at least one grade above the minimum required for passing will be exempt from the examinations in all strictly professional subjects, such as Psychology, History of Education, General Pedagogy, School Administration, and in certain other subjects required for this certificate.

### ADVANCED STANDING

#### *By Examination*

The tendency of the College of Education is distinctly toward discouraging any effort to secure advanced standing in professional subjects by examination. With the establishment of correspondence courses in the General Extension Division, there are no longer the reasons which formerly existed for granting such examinations. (See also statement, *Practice Teaching*, page 20.)

#### *Graduates of Minnesota Normal Schools*

The College of Education grants to graduates of the Advanced Graduate Course of Minnesota State Normal Schools sixty credits of advanced

standing (approximately two years' credit); to graduates of the Advanced Latin or Advanced English courses, forty-two credits.

Normal school graduates desiring admission to the College of Education must present a recommendation from the President of the normal school from which they were graduated, together with a record of the courses pursued and grades received.

Students admitted to the College of Education from normal schools will not be permitted to elect the following courses for credit: Education 1; Philosophy 1-2, or 5; Rhetoric 1-2; History 1-2.

For a statement of records to be submitted, see Bulletin of General Information, pp. 25-26.

#### CLASS ROUTINE AND SCHOLASTIC REQUIREMENTS

The following regulations refer chiefly to undergraduates; graduate students should consult the bulletin of the Graduate School.

Classes are held mornings and afternoons of every week day except Saturday afternoon. (For teachers' afternoon and Saturday classes see page 16.)

No student may elect work during any semester in more than five departments. Students must elect at least fourteen hours a week. Students may ordinarily elect not more than seventeen credit hours. A student who has, during the preceding semester or two semesters, earned an average of one and one-half honor points for each credit hour taken and who has had no condition or failure the preceding semester, may elect eighteen hours, upon approval by the Administrative Board of a petition for permission to do the same. For explanation of Credit Hours and Honor Points, see page 14.

Students whose absences exceed four weeks in the aggregate during a semester are not permitted to take the semester examinations without permission of the Administrative Board. Any student reported below grade in sixty per cent of his work, or in three subjects, at the middle or close of the first semester or middle of the second semester is dropped from the rolls and not allowed to re-enter the University until the opening of the following year.

Examinations are held at the close of each semester. A student's grade is based upon his class work and examination. Four passing grades are given, namely, A, B, C, and D. Work not done satisfactorily is marked I (incomplete), E (condition), or F (failure). An incomplete must be removed within one month after the opening of the following semester; otherwise it becomes a condition.

A failure must be removed by pursuing the work again in class the next time the course is offered.

#### CERTIFICATES

##### *Required in Minnesota*

Every teacher in the Minnesota Public Schools must have a valid certificate before he can be lawfully employed. Two classes of certificates are of interest to University students:

1. A First Grade Professional Certificate renders its holder eligible for the following positions: (1) Superintendent of Schools (if candidate has also had two years' experience in supervising grades); (2) Principal of a Graded or High School; (3) Instructor in any high school subject, except those subjects which demand special certificates.

2. A Special Certificate authorizes the holder to teach the special subjects indicated on the certificate. The University prepares students for special certificates in: (1) Music; (2) Drawing; (3) Home Economics; (4) Manual Training; (5) Agriculture; (6) Commercial Subjects.

3. High School Training Teachers and Teacher-Librarians. In addition to the courses preparing for special certificates the College of Education offers courses to prepare teachers for high-school rural training departments and high school teacher-librarians. The State Department issues no special certificates for these two classes of teachers, but gives an official endorsement to students who complete these courses in the College of Education.

#### *The University Teachers' Certificate*

1. Two-Year Certificate. The University Teachers' Certificate, granted to every graduate of the College of Education, is valid for two years as a First Grade Professional Certificate. Holders are eligible for all positions open to holders of the First Grade Professional Certificate named above.

2. Life Certificates. After two years of successful teaching experience, the University Teachers' Certificate may become a life certificate upon endorsement by the State Department of Education and the President of the University. This two-years' experience must be gained within Minnesota. Graduates who teach in another state may, upon returning to Minnesota, apply to the State Department of Education for an extension of their University Teachers' Certificate for two years at the completion of which, application may be made for a permanent life certificate. The fee for this extension is \$1.00. Holders of the University Teachers' Certificate who wish to have their certificate made a permanent life certificate should apply directly to the State Department of Education, St. Paul, for a permanent endorsement of the certificate. The fee for this endorsement is \$5.00.

#### THE DEGREE OF BACHELOR OF ARTS (IN EDUCATION)

The degree of Bachelor of Arts (in Education) may be conferred by the College of Education upon any student who fulfills all the requirements stated below.

#### *Summary of Requirements*

1. Amount and grade of work.—During his entire course the student must earn: (a) one hundred and twenty credit hours in addition to the required exercises in drill, gymnasium, and physical education; (b) one hundred and twenty honor points; (c) one and one-half honor points per credit hour in his major subject.

2. Courses required and allowed. (a) The student must have completed (normally during sophomore year) a general introductory course in psychology (e. g. Philosophy 1-2, or 5, or an equivalent of the same); (b) he must have satisfied all the requirements for the University Teachers' Certificate (see statement of prescribed course, page 19).

3. Distribution of Work—Major and Minors. A student must take a sufficient number of courses so distributed among at least three distinct departments concerned with the work of the secondary school as to secure one major and two minors. Either Education or Psychology may be counted as a major or a minor in this group.

4. Residence. At least thirty credits must be earned in residence in this college. If the term of residence is only one year, that year must be the senior year; and in any case, at least half of the work of the senior year must be done in residence. Attendance at the summer session counts as residence.

#### *Explanation of Requirements*

The amount of work pursued by a student is estimated in credit hours; the quality or grade of his work, in honor points.

A *Credit Hour* is one hour per week of recitation or lecture work extending throughout one semester, or three hours per week of laboratory work through one semester. It is assumed that each credit hour will demand on the average three hours a week of the student's time—for recitation or lecture, one hour in class and two hours preparation; for laboratory courses, three hours in the laboratory.

*Honor Points* are computed as follows: each credit hour with the grade of A entitles the recipient to three honor points; each credit hour with the grade of B to two honor points; each credit hour with the grade of C to one honor point; each credit hour with the grade of D to no honor points. Illustration: A student completing a one-semester three-credit course and receiving the grade A would be entitled to nine honor points; if receiving the grade B to six honor points; if receiving the grade C to three honor points; if receiving the grade D to no honor points.

*Major and Minors.*—Twelve credits is the minimum requirement for a minor and eighteen credits for a major, in the College of Education. Usually a minor will demand from fifteen to eighteen credits with a corresponding increase for the major, depending upon the combination which the student has selected with a view to future teaching. Only in special cases will the minimum mentioned above be accepted. The definite determination of the credits required is left in each case to the department concerned, for a statement of which consult the departmental statements appearing further on in this bulletin.

#### GRADUATION WITH DISTINCTION

The degree of Bachelor of Arts in Education with Distinction is granted to graduates of this College who fulfill the following conditions:

A. Special excellence in major subject;

B. Application for the degree with distinction should be made at the

time of entering the College, but may, however, be postponed until the opening of the senior year;

C. At the time of application the student shall, after conference with the Dean of the College of Education, or some other member of the Faculty appointed for that purpose, select a subject for his thesis, which must be formally approved and recorded;

D. The presentation of a satisfactory thesis upon some subject within the major field of study not later than May 1, senior year;

E. At the time of application the student must have an average of one and one-half honor points per credit hour in all previous work;

F. At the time of graduation the student must have met all conditions applying to the ordinary Bachelor's Degree in Education; must show a record of one and one-half honor points per credit hour in *four-fifths of all work pursued throughout his entire course*; and

G. Must be recommended to the Faculty for the degree with distinction, which recommendation must be approved by the vote of the Faculty of the College.

#### GRADUATE WORK IN EDUCATION

*Graduate Study.*—Graduate courses in Education leading to the degree of Master of Arts or Doctor of Philosophy may be pursued in the Graduate School. Students who desire to undertake graduate work in Education must have had at least a year's work in psychology and in addition to this, a total of not less than twelve credits in Education. Graduates, holding a Bachelor's degree, who have less than twelve credits in undergraduate courses in Education, will be obliged to increase the number of credits required for a major or a minor in Education by the difference between twelve and the number of undergraduate credits in Education which they present. Such students will not, however, be debarred from counting all the time spent at the University toward satisfying the residence requirement of graduate work, provided the work which they pursue is approved by the Dean of the Graduate School.

*During summer session* graduate work may be pursued. The Master's degree may ordinarily be completed in four summer sessions. For full statement of regulations, consult Graduate School Bulletin.

#### TEACHING ASSISTANTS IN MINNEAPOLIS PUBLIC SCHOOLS

The College of Education in coöperation with the Minneapolis public schools has adopted a plan to go into effect in the fall of 1915, which provides for employing in the Minneapolis high schools a certain number of University graduates to be known as "teaching assistants." The adoption of this plan is in essence the establishment in the Minneapolis public schools of a certain number of teaching fellowships for graduate students. These teaching assistants will receive compensation for their work in the schools proportionate to the amount of time devoted to teaching; \$300 for the first year; \$400 for the second year.

For each assistant a definite course, combining graduate professional study and teaching experience will be outlined. Altho the plan pro-

vides an abundance of teaching experience, the greater emphasis will be thrown upon advanced professional study.

*Work in Minneapolis schools.*—Teaching assistants shall be on duty at the schools from 8:30 until 12:15. Their work will be divided between teaching and assisting. During their first year they shall not instruct more than two classes per day, that is, one-third of a regular teacher's teaching periods. If they continue a second year, the portion of their time devoted to class instruction may be increased to three periods a day. Their work as teaching assistants shall be limited to the hours during which they are in duty in the schools and no additional work other than preparation for teaching their regular courses shall be required of them outside of the above set schedule of hours.

*Applications for positions* as teaching assistants should be made directly to the Principal of the University High School. The number of such positions cannot be absolutely determined in advance of the opening of the Schools.

#### SPECIAL OPPORTUNITIES FOR TEACHERS IN SERVICE

Afternoon and Saturday morning classes, correspondence lessons, extension classes and the summer session are the chief channels through which the College of Education seeks to discharge its obligations to teachers in service.

##### *Afternoon and Saturday Classes*

A special announcement of late afternoon and Saturday morning classes arranged especially for teachers, together with a statement of the requirements for admission and method of registration will be issued by the College of Education early in September.

##### *Teacher Training through Extension Courses*

The General Extension Division offers excellent opportunities for teachers and others to pursue courses carrying credit for the Bachelor of Arts degree or for the professional state teachers' certificate, either by correspondence lessons or by joining an extension class. For further information address The General Extension Division, University of Minnesota.

#### SUMMER SESSION

The summer session conducted by the University under the direction of the Dean of the College of Education offers unusual opportunities for professional training to undergraduates, graduates, superintendents and principals, teachers in service, and candidates for first grade and second grade State Professional Certificates. The summer session of 1916 will begin Monday, June 12.

#### EMPLOYMENT BUREAUS

*Appointment Bureau.*—Through its Appointment Bureau the College of Education endeavors to place its own graduates and those of the College of Science, Literature, and Arts in positions best suited to their

training and experience. Students looking forward to teaching should register during the first semester of their senior year; *no fee, however, will be charged to those who register before February 15.* Complete instructions and registration blanks may be secured at the office of the Appointment Bureau (for room number see directory posted in corridor).

*State Teachers' Employment Bureau.*—The State Teachers' Employment Bureau, located in the State Capitol, St. Paul, under the direction of Mr. E. T. Critchett, offers its services to all teachers and prospective teachers. The fee for registration is \$3.00.

Neither the College of Education nor the State Teachers' Employment Bureau exacts any commission.

## COURSES OF STUDY

### NEW COURSES

Courses to be offered for the first time during the year 1915-1916 will be found chiefly within the following fields: School Administration, Educational Psychology, Foreign Schools, High School Rural Training, Teacher-Librarian Training, Manual Training, Vocational Guidance, and Industrial Education.

### GUIDANCE IN THE SELECTION OF COURSES

#### *Superintendents and Graded School Principals*

It is probable that within a year the State High School Board will require that prospective superintendents and principals of graded schools who have not had at least two years' experience in a supervisory position in a school of at least two departments shall, before entering upon their duties, have had courses in School Administration and School Supervision in some recognized normal school or college, totaling at least five semester credits. The following courses will be credited toward this requirement: 121, 123, 124, 125, and 126. Course 121 is a general introduction to all other courses in School Administration and is especially recommended to those beginning a study of this field.

#### *Graduate Students*

All courses bearing numbers of 100 and above are open to graduate students. Before attempting to make out their programs, graduate students in Education should consult the Dean of the College of Education and the Dean of the Graduate School. Attention is called to the fact that course 125 is ordinarily required of all candidates for advanced degrees. Courses bearing numbers 200 and above are open to graduate students only.

All graduate students majoring in Education are expected to meet with the department staff every alternate Monday evening from 7:15 to 9:00 for conference regarding subjects of original investigation. This work carries no credit. See also pages 15-16 of this Bulletin.

#### *Candidates for State Professional Certificate*

Unclassed students, candidates for the State Professional Certificate, may pursue courses in residence or by correspondence or in extension classes. For guidance in the selection of courses relating to this certificate, consult statement, State Professional Teachers' Certificate, page 13.

#### *Undergraduates*

Students should consult carefully the departmental descriptions of courses required for admission to teachers' course. The teachers' courses in each department must be taken in advance of or contemporaneously with practice teaching. Many departments require more than a minor for

admission to teachers' courses in the case of students who wish to offer the subject only as a minor.

See the following topics in this bulletin: (1) University Teachers' Certificate, page 13; (2) major and minors, page 14; (3) special training courses, pages 20-23; (4) admission, page 10; (5) prerequisite for teachers' courses, page 20; (6) starred courses, page 24.

#### UNDERGRADUATE COURSE

A two years course leading to the degree of Bachelor of Arts (in Education) entitles the recipient in every case to a University Teachers' Certificate.

Candidates for this degree may major in any department offering work in the College of Education.

Recipients of the degree of Bachelor of Arts (in Education) and of the University Teachers' Certificate may, by a proper selection of studies during their regular course, become eligible for recommendation or endorsement for manual training, high school teacher-librarian or high-school teacher-training department.

*Prescribed course of study for University Teachers' Certificate.*—The College of Education has adopted the prescribed course of study outlined below, to be required of all candidates for the University Teachers' Certificate and for the degree of Bachelor of Arts (in Education), the same to become effective in September, 1915.

No.	Title	To be taken		
		Credits	Semester	Year
1.	Brief History of Education.....	3	1 or 2	Jr.
	or			
101-102.	History of Education.....	6	1 and 2	Jr.
	3. Social Aspects of Education.....	3	1 or 2	Jr.
111.	Technique of Teaching.....	3	1 or 2	Sr.
115.	Practice Teaching (see statement below).....	3	1 or 2	Sr.
	Teachers' Courses (i.e., courses in special methods) covering at least two high schools subjects and totaling at least three credits†.....	3	1 or 2 or 1	Jr. Sr.

A general introductory course in psychology is a prerequisite for all courses in Education. Credits gained by it, however, are not counted as professional credits toward the teachers' certificate.

†In some cases the amount of work necessary to meet this requirement will total six credits. In other cases a single teachers' course totaling only three credits is arranged in such a way as to cover two subjects, thereby satisfying this requirement. An example of this is the teachers' course in English and Rhetoric.

*Members of the class of 1916* will be granted the degree and the teachers' certificate upon the basis in effect at the time of their registration in the College of Education. Therefore, in lieu of the prescribed course, they may offer the following: (1) a general introductory course in psychology (Philosophy 1-2 or 5) and (2) courses 1 or 101-102 in Education, together with (3) additional work in Education to make a total of eighteen credits, including those specified in Philosophy. In these additional credits must be included Practice Teaching, and teachers' courses in two subjects, together carrying at least three credits.

*Graduates of normal schools* who, upon entering the College of Education, receive credit for any of the courses specified above will be allowed to elect in the place of the same other strictly professional subjects.

#### PRACTICE TEACHING

Opportunity for Practice Teaching is provided in part by the University High School and in part by the Minneapolis City Schools.

Education 1 or 101-102, 3, 111, and the teachers' course in the department in which the student wishes to do practice teaching, together with all subjects required by the department concerned as prerequisite to the teachers' course (see departmental statement) are prerequisite to the course in Practice Teaching. No student will be permitted to do practice teaching who has not been definitely recommended by the department in which the subject lies as being well-prepared from the standpoint of subject matter. In cases where the teachers' course extends throughout two semesters, students will in exceptional cases be permitted to do their practice teaching during the second semester of their teachers' course.

#### *Applications and Credentials*

All assignments to Practice Teaching are made by the Principal of the University High School. Before registering for this work students must consult with him and submit: (1) the departmental recommendation referred to above and (2) a statement from the Registrar showing the courses they are offering as prerequisites including, (a) the courses in Education, (b) the courses in the department concerned. This statement must show when these courses were taken and the grade received and it must be followed by a formal statement that the student has satisfied all the prerequisites for practice teaching.

*Credits allowed in Agriculture and Home Economics.*—A maximum of eighteen credits is elective from courses in Agriculture and Home Economics, but it should be noted that prospective teachers of these subjects must secure from the State Department of Education in advance of their contract to teach, a special certificate in the subject concerned. Students looking forward to the teaching of Agriculture or Home Economics are advised under ordinary circumstances to register in the College of Agriculture.

### SPECIAL TRAINING COURSES

#### AGRICULTURE

The preparation of Teachers of Agriculture is under the direction of the Division of Agricultural Education. (See Bulletin of the College of Agriculture).

#### COMMERCIAL TRAINING

The demand for university graduates as commercial teachers has been greater than the University has been able to meet. A new require-

ment of the State Department that teachers of commercial subjects must be college graduates will intensify this demand. The University has as yet made no arrangements to offer the technical subjects required for this work, such as stenography, typewriting, penmanship, bookkeeping, etc. Nevertheless, by a proper selection of courses in English, rhetoric, foreign languages, history, economics, psychology, and education, students who have secured a knowledge of the technical subjects elsewhere can get a broad and sound foundation for this work during their university course.

The following courses are especially recommended to students looking forward to this work: English 1-2; Rhetoric 1-2 and 11-12; Languages—German, Spanish, or French; History 1-2 and 3-4; Economics 1-3, 13, 18, 19, 31, 33, 34, 35, 36, 42, 43, 47, 48, 142, 145, 146; Political Science, 1, 13, 14; Psychology 1-2; Education, all courses prescribed for the University Teachers' Certificate.

#### HOME ECONOMICS

The preparation of teachers of Home Economics is under the direction of the Department of Home Economics, College of Agriculture. (See statement above under *Agriculture*, also departmental statement, pages 30 and 53 of this bulletin, and Bulletin of College of Agriculture.)

#### MANUAL TRAINING

During the year 1914-1915 plans were effected looking towards a complete reorganization of the preparation of manual training teachers. Mr. R. L. Southworth, a graduate from the manual training course, Teachers' College, Columbia University, whose experience as a manual training instructor in public school work has covered every type of work in the grades and high school, will have general supervision and direction of all the work. Under Mr. Southworth's direction, all work will be presented from the standpoint of the needs and conditions of the public schools, special attention being given to the present tendency to relate manual training to communal and industrial needs.

Students looking forward to teaching manual training may, under the present arrangements, offer manual training as a minor in the College of Education. Under Manual Training in the departmental statements will be found a prescribed course of study to be required of all students whom the College of Education will recommend for certificates as teachers of manual training.

#### TEACHER-LIBRARIANS

Owing to the existence of a large number of small high schools, and to a recent ruling of the State High School Board made in 1915 which requires every state-aided high school to provide trained service for the high school library, there will undoubtedly be an urgent and increasing demand during the next few years for teachers who have had some definite library training and who will divide their time between teaching and the care of the school library. The College of Education will offer for the first time during the year 1915-1916, under the direction of Miss

Martha Wilson, State Supervisor of School Libraries, a brief course for training high school teacher-librarians. Those who complete the three courses named below will receive a teacher-librarian certificate and three credits in the Department of Education.

These courses extend over two years and will be confined to Saturday mornings from 11:00-11:50 with additional laboratory periods, to be arranged. Course 1 will be offered the first semester of 1915-1916 and 1916-1917; course 2, the second semester of 1915-16; course 4, the second semester of 1916-17. Students who begin library training the first semester of their junior year will be able by the end of their senior year to have satisfied the requirements for work as high school teacher-librarians. Students beginning the first semester of their senior year may complete their training by pursuing the course in the summer school.

For description of courses, see departmental statement, page 31.

#### HIGH SCHOOL TRAINING DEPARTMENTS

A complete reorganization of the work designed to prepare teachers of high-school training departments has been effected and a definite course of study under the direction of the College of Education has been arranged. This course is open only to teachers who have had two years of rural teaching experience and who in addition to this are graduates from the advanced course of a Minnesota State Normal School or who possess equivalent professional preparation. Note: To this second requirement exceptions may be made in the case of teachers already engaged in high-school training departments and in certain other individual cases where circumstances justify the same.

In the conduct of the course the College of Education will be assisted by Miss Mabel Carney, State Supervisor of Teachers' Training Departments, who will offer a course of monthly lectures and conferences extending throughout the year. The courses in the methods of teaching the elementary studies will be in the hands of teachers actually engaged in High School Training Departments.

Ordinarily two years will be required to complete this course. However, teachers already engaged in high-school training departments and holding First Grade Professional Certificates and who are unable to absent themselves from their duties for more than a year will be permitted to deviate from the prescribed course of study and to elect such subjects as will be of most immediate use to them in their work.

The State Department of Education issues no special certificate for teachers of high-school rural training departments. It gives its official endorsement to teachers whom it considers satisfactory from the standpoint of preparation, experience, and personal qualifications.

Students who complete the course offered by the College of Education for teachers of training departments will be eligible for the endorsement of the State Department of Education for heads of training departments in high schools. The course as outlined provides Education as a major study, with Economics and English as minors. The selection of these two subjects as minors has been based upon the nearness of

their relation to the work of the rural school teacher. The education courses are all required, but other minors may be selected upon approval.

For an outline of the prescribed course of study, consult departmental statement, pages 32-33.

#### TEACHERS OF DEFECTIVES

During the past year the College of Education, in coöperation with the department of Psychology, has been able to prepare a limited number of teachers of mental defectives. Plans are now in progress for a further development of this phase of teacher preparation and it is hoped that by coöperating with the state institutions for defectives upon a basis somewhat similar to that adopted in connection with the Minneapolis schools for teaching-assistants, it may prove possible in the near future to organize effective training courses for teachers of the blind, and the deaf and dumb, as well as for teachers of mental defectives. Students interested in preparing for this type of work should consult with the Dean of the College.

#### KINDERGARTEN AND ELEMENTARY TEACHERS

The College of Education offers opportunity for advanced study to teachers who have had adequate normal school training and who wish to take further preparation for work as principals or supervisors of elementary schools. The college, however, recognizes clearly that the training of elementary school teachers and of kindergarteners does not lie within its province. Nevertheless, the following agreements between the presidents of the State Normal Schools of Minnesota and the Executive Faculty of the College of Education, reached at an informal conference, April 3, 1915, make it possible for students in the College of Education, who discover during their course that their taste and ability lie in the elementary field, to transfer from the College of Education to one of the normal schools at the opening of their senior year and thus prepare themselves as elementary teachers or as kindergarteners without loss of time.

##### *Agreements between Normal Schools and College of Education*

1. That less than one year of residence at a State Normal School for the purpose of preparing for kindergarten or elementary school work would not be adequate.
2. That the normal schools would be willing to confer their regular diploma upon university students coming to them from the College of Education, who had had three years of college work, upon the satisfactory completion of one year in the normal schools.
3. That these provisions be limited to students previously registered in the College of Education.
4. That they should not apply to students who had entered the College of Education upon the basis of normal school credits.

#### PUBLIC SCHOOL MUSIC

See course 27-28 under statement of Department of Music.

## DEPARTMENTAL STATEMENTS

### EXPLANATION OF COURSE NUMBERS

Odd numbers indicate first-semester courses; even numbers, second-semester courses. A combination of the two (e. g., 5-6) indicates courses continuing through the year. In the case of courses repeated the second semester, the suffix *a* indicates first semester; the suffix *b*, second semester.

All undergraduate courses are numbered from 1 to 100. All courses open to undergraduates and graduates are numbered from 101 to 200. Strictly graduate courses are numbered from 201 up.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

## EDUCATION

Professors LOTUS D. COFFMAN, ALBERT W. RANKIN, FLETCHER H. SWIFT, M. E. HAGGERTY; Assistant Professor RAYMOND A. KENT; Instructors R. B. INGLIS, J. W. NORMAN, W. D. REEVE; Lecturers ALBERTA ACKERMAN, MABEL CARNEY, MAY H. DILLS, T. P. GIDDINGS, D. H. HOLBROOK, CORAL L. OSBORN, RAY L. SOUTHWORTH, JUDSON R. TOWNE.

### REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, eighteen credits, including Philosophy 1-2, or equivalent.

*For a Major*, twenty-four credits, including Philosophy 1-2, or equivalent. Six credits in Psychology are prerequisite for all courses in Education.

No.	Title	COURSES		
		Credits	Offered to	Prereq. courses
1a.	Brief Course in the History of Education.....	3	Jr., sr.	Phil. 1-2
1b.	Brief Course in the History of Education.....	3	Jr., sr.	Phil. 1-2
3a.	Social Aspects of Education	3	Jr., sr.	Phil. 1-2
3b.	Social Aspects of Education	3	Jr., sr.	Phil. 1-2
101.	History of Educ. to Reformation.....	3	Jr., sr., grad.	Phil. 1-2 and 6 credits in dept. of Hist.
101t.	History of Educ. to Reformation.....	3	Teachers only	Phil. 1-2
102.	History of Educ. since Reformation.....	3	Jr., sr., grad.	Phil. 1-2 and 6 credits in dept. of Hist.
102t.	History of Educ. since Reformation.....	3	Teachers only	Phil. 1-2

No.	Title	Credits	Offered to	Prereq. courses
104.	Principles of Method .....	3	Sr., grad.	1 or 101-102 and 3
105.	Educational Psychology....	3	Sr., grad.	1 or 101-102 and 3
107-108.	Prob. in High School Training Departments.....	0	Jr., sr., grad.	1 or 101-102
110.	Rural School Curriculum...	2	Sr., grad.	3 and 111
111a.	Technique of Teaching....	3	Jr., sr. ....	Phil. 1-2
111b.	Technique of Teaching....	3	Jr., sr., grad.	Phil. 1-2
114.	Current Problems in Elementary Teaching.....	3	Sr., grad.	1 or 101-102 and 3
115a.	Practice Teaching.....	3	Sr., grad.	See statement
115b.	Practice Teaching .....	3	Sr., grad.	See statement
119.	School Curricula.....	3	Sr., grad.	1 or 101-102 and 3
121.	School Organization and Administration.....	3	Sr., grad.	1 or 101-102 and 3
123.	Theory of Supervision.....	3	Sr., grad.	1 or 101-102 and 3
124.	Educational Administration	3	Sr., grad.	121
125.	Methods in Educational Research.....	2	Sr., grad.	1 or 101-102 and 3
126.	Units and Scales for Measuring Results.....	2	Sr., grad.	1 or 101-102 and 3
128.	Auxiliary Education.....	3	Sr., grad.	105
131.	Foreign School Systems...	3	Sr., grad.	1 or 101-102 and 3
131t.	Foreign School Systems...	3	Teachers only	1 or 101-102 and 3
141.	School Sanitation and Public Health.....	3	Sr., grad.	1 or 101-102 and 3
142.	Industrial Education.....	2	Sr., grad.	1 or 101-102 and 3
143.	Problems in Vocational Guidance.....	0	Jr., sr., grad.	Phil. 1-2
144.	Vocational and Moral Guidance.....	3	Sr., grad.	1 or 101-102 and 3
146.	History and Principles of Religious Education....	3	Jr., sr., grad.	Phil. 1-2
152.	Elem. Meth. in Reading...	1	Jr., sr., grad.	1 or 101-102
153.	Elem. Meth. in English...	1	Jr., sr., grad.	1 or 101-102
154.	Elem. Meth. in Ind. Arts..	1	Jr., sr., grad.	1 or 101-102
155.	Elem. Meth. in History ..	1	Jr., sr., grad.	1 or 101-102
156.	Elem. Meth. in Geography	1	Jr., sr., grad.	1 or 101-102
157.	Elem. Meth. in Arithmetic	1	Jr., sr., grad.	1 or 101-102
201-202.	Seminar Selected Problems in Educational History..	2	Grad.	101-102 and 6 credits in History Dept.
203-204.	Seminar in Educational Psychology.....	2	Grad.	105
205-206.	Seminar in Educational Administration.....	2	Grad.	124, 125, 126

## HISTORY OF EDUCATION

1a or 1b. A BRIEF COURSE IN THE HISTORY OF EDUCATION. Current school problems and educational theories in the light of their history. Emphasis upon secondary education and those aspects of education of most immediate concern to high-school teachers. SWIFT, NORMAN.

101. HISTORY OF EDUCATION TO THE REFORMATION. An interpretative historical study of educational institutions and ideals, designed for those who wish a more comprehensive historical view than can be gained in Education 1. The foundations of modern education—Hebrew, Greek, Roman, Medieval. SWIFT.

101t. Same as Course 101, but for teachers only. A year course. SWIFT.

102. HISTORY OF EDUCATION SINCE THE REFORMATION. Modern educational movements, current theories, and standards in the light of their history. For fuller description of general character of course, see course 101. SWIFT.

102t. Same as course 102, but for teachers only. A year course. (Not offered in 1915-1916.) SWIFT.

201-202. SEMINAR. Selected problems in Educational History. Research course designed for graduate students. SWIFT.

## PRINCIPLES OF EDUCATION

104. PRINCIPLES OF METHOD. An advanced course in principles of method with special application to high-school subjects. HAGGERTY.

111a or 111b. TECHNIQUE OF TEACHING. Types of classroom exercises; preparation of teaching plans; hygiene of instruction; classroom management; the professional ethics of teaching; observation of high-school work. COFFMAN, .....

## EDUCATIONAL PSYCHOLOGY

105. EDUCATIONAL PSYCHOLOGY. An advanced course in psychology of the learning process. HAGGERTY.

203-204. SEMINAR IN EDUCATIONAL PSYCHOLOGY. A research course for graduate students. Problems in educational psychology. HAGGERTY.

## SCHOOL ADMINISTRATION

3a or 3b. SOCIAL ASPECTS OF EDUCATION. The school as a community factor; the present peculiar relation of the school to social problems; the function of the school in these relations. KENT, RANKIN.

107-108. PROBLEMS OF THE HIGH SCHOOL TRAINING DEPARTMENT. Lectures and conferences upon the problems of high-school teacher-training departments. No credit. CARNEY.

110. RURAL SCHOOL CURRICULUM. The problems of organization of the elementary school curriculum with reference to the rural school and rural life. .....

114. CURRENT PROBLEMS IN ELEMENTARY TEACHING. An advanced course in current problems. Definite problems will be assigned to each student to be worked out under the direction of the instructor through readings, visitation of schools and conferences and class discussion. RANKIN.

119. SCHOOL CURRICULA. The curriculum as related to social, industrial, and economic conditions; a survey of the grammar grades and of the high school. Consideration of the possibilities of developing a curriculum better adapted to community needs. RANKIN.

121. SCHOOL ORGANIZATION AND ADMINISTRATION. An introductory course in school administration for students of teaching experience and for those looking forward to work as principals and superintendents. RANKIN.

123. THEORY OF SUPERVISION. The problems involved in the training of teachers in service; studies of qualities of merit in teachers; factors in selecting teachers; the distribution of subject matter by grades; the time allotment of studies. COFFMAN.

124. EDUCATIONAL ADMINISTRATION. The interpretation of present tendencies in the administration of state and city school systems. COFFMAN.

125. METHODS IN EDUCATIONAL RESEARCH. A study of statistical and other methods as applied to educational investigation. This course is ordinarily required of all candidates for advanced degrees. COFFMAN.

126. UNITS AND SCALES FOR MEASURING EDUCATIONAL RESULTS. An intensive study of the application of units and scales for measuring achievement in reading, composition, spelling, handwriting, and arithmetic. COFFMAN.

128. AUXILIARY EDUCATION. A study of educational provisions for defectives, blind, deaf, speech, mental. Institutions, subject matter, and methods. HAGGERTY.

205-206. SEMINAR IN EDUCATIONAL ADMINISTRATION. COFFMAN.

#### SCHOOL SANITATION AND HYGIENE

141a. SCHOOL SANITATION AND PUBLIC HEALTH. A course in school hygiene in its broader aspects. Designed for all teachers and supervisors who are responsible for the health of school children. Treats of medical supervision and other problems arising from school environment. RANKIN.

#### FOREIGN SCHOOLS

131. FOREIGN SCHOOL SYSTEMS. A study of existing school systems of other countries with a view to possible suggestion for development of public education in the United States. The emphasis in this course

will be placed upon present conditions: in 1915-16, French Schools. SWIFT.

131t. Same as 131, but for teachers only. SWIFT.

#### INDUSTRIAL EDUCATION AND VOCATIONAL GUIDANCE

142. INDUSTRIAL EDUCATION. Existing types of industrial and vocational schools and systems of training. Comparison of conditions in America and foreign countries. Organization of course of study.

143. PROBLEMS IN VOCATIONAL GUIDANCE. A general introductory course in vocational guidance. Weekly conferences and discussions. Original investigations of current problems under the direction of the instructor, supplemented by reading and lectures. No credit. HOLBROOK.

144. VOCATIONAL AND MORAL GUIDANCE. This course is designed for all who are interested in the problem of directing boys and girls toward their life work through education. It is of special value to superintendents, principals, and teachers of civics. (Not offered in 1915-16).

#### MORAL AND RELIGIOUS EDUCATION

146. HISTORY AND PRINCIPLES OF RELIGIOUS EDUCATION. Part I: The influence of religion and religious education as social and spiritual forces among certain selected types. Part II: Principles of education as applied to religious instruction and training. This course may be pursued as a graduate course under certain conditions. SWIFT.

#### PRACTICE TEACHING

115a or 115b. PRACTICE TEACHING. Teaching under supervision in the University High School and in the Minneapolis city schools, in the regular secondary school subjects. The course calls for one period daily at the school where the work is assigned. (See statement of prerequisites and regulations governing Practice Teaching, page 20.)

#### METHODS OF TEACHING

1. General Method—See above courses 104 and 111.
2. Teachers' Courses or Courses in Special Methods of Teaching High School Subjects.

A description of the methods courses offered in the Rural Training Department is given immediately after the following tabular statement. A full description of all other Teachers' Courses together with their prerequisites appears in each departmental statement. For the year 1915-1916 the courses in English and Rhetoric and Physics receive credit only as courses in Education.

A recent ruling of the State Department of Education requires courses in special methods of at least two different high-school sub-

jects and totaling at least three credits, for all applicants for the State Professional Teacher's Certificate. In some cases the amount of work necessary to meet this requirement will total six credits. In other cases a single teachers' course totaling only three credits is arranged in such a way as to cover two subjects, thereby satisfying this requirement; an example of this is the teachers' course in English and Rhetoric.

Department	Course No.	Credits	Offered to	Instructor
Animal Biology.....	31-32	3	Soph., jr., sr.	Sigcfoos
Botany.....	121-122	6	Jr., sr., grad.	Clements
Chemistry.....	20	2	Jr., sr.	Cohen
*English (and Rhetoric).....	130	3	Jr., sr.	Inglis
Geography.....	55	2	Jr., sr.	Posey
German.....	59-60	2	Jr., sr.	Schlenker
History and Political Science.....	56-57	3	Jr., sr.	Krey
Latin.....	101-102	6	Jr., sr.	Pike
*Library Methods.....	1, 2, 4	3	Jr., sr.	Wilson
*Manual Training.....	11-12	2	Jr., sr.	Southworth
Mathematics.....	54a-54b	2	Jr., sr.	Reeve
Music.....	27-28	6	Jr., sr.	Giddings
Norwegian.....	110	2	Jr., sr.	Bothne
*Physics.....	89-90	2	Jr., sr.	Towne
Political Science and History.....	56-57	3	Jr., sr.	Krey and Schaper
Rhetoric.....	130	3	Jr., sr.	Inglis
†Swedish.....	.....	3	Jr., sr.	Stomberg
<b>*Elementary Methods—</b>				
in Arithmetic*.....	157	1	Sr.	Ackerman
in English*.....	153	1	Sr.	Dills
in Geography*.....	156	1	Jr.	Ackerman
in History*.....	155	1	Sr.	Osborn
in Industrial Arts*.....	154	1	Jr.	Osborn
in Reading*.....	152	1	Jr.	Dills

\*Receives credit only in Department of Education.

†Not offered in 1915-16.

#### HIGH SCHOOL TRAINING DEPARTMENT METHODS

152. ELEMENTARY METHODS IN READING. The place of reading in the rural school curriculum. Different types of lessons, equipment, materials, adaptation to needs of rural community. DILLS.
153. ELEMENTARY METHODS IN ENGLISH. The place of English in the rural school curriculum. Different types of lessons, equipment, materials, adaptation to needs of rural community. DILLS.
154. ELEMENTARY METHODS IN INDUSTRIAL ARTS. The place of industrial arts in the rural school curriculum. Different types of lessons, equipment, materials, adaptation to needs of rural community. OSBORN.
155. ELEMENTARY METHODS IN HISTORY. The place of history in the rural school curriculum. Different types of lessons, equipment, materials, adaptation to needs of rural community. OSBORN.

156. ELEMENTARY METHODS IN GEOGRAPHY. The place of geography in the rural school curriculum. Different types of lessons, equipment, materials, adaptation to needs of rural communities. ACKERMAN.

157. ELEMENTARY METHODS IN ARITHMETIC. The place of arithmetic in the rural school curriculum. Different types of lessons, equipment, materials, adaptation to needs of rural communities. ACKERMAN.

### AGRICULTURAL EDUCATION

Students in the College of Education may upon the approval of the Dean of the College of Education and of the Chief of the Division of Agricultural Education pursue courses in the College of Agriculture to the amount of eighteen credits.

Students should consult the descriptions of the Departments of Economics and Sociology in this bulletin where they will find several courses dealing with the problems of rural life and of agriculture: e. g., Economics 18, Agricultural Economics and Sociology 14, Rural Sociology.

### MANUAL TRAINING

Lecturer RAY L. SOUTHWORTH; Assistant Professors FRANKLIN R. McMILLAN, S. CARL SHIPLEY; Instructors EDWARD P. QUIGLEY, WILLIAM H. RICHARDS.

#### REQUIREMENTS OF THE DEPARTMENT

*For a Minor*—The seventeen credits required in the prescribed course outlined below, or their equivalent.

*For a Major*—Manual training cannot be offered as a major.

*For a Teacher's Certificate*—Completion of the following prescribed course or its equivalent.

#### COURSES

No.	Title	Credits	Offered to	Prereq. courses
1.	Constructive Drawing.....	1½	Jr.	None
2.	Mechanical Drawing.....	2	Jr.	1
3.	Woodwork.....	2	Jr.	None
4.	Woodwork.....	1½	Jr.	3
6.	Woodturning and pattern making.....	2	Jr.	1,3
7.	Forge.....	2	Sr.	1-6
8.	Machine Shop.....	2	Sr.	1-7 and 9
9.	Clay, Cement and Foundry	2	Sr.	1-6
11-12.	Method and Organization..	2	Sr.	1-6

NOTES:—(1) In all Manual Training courses, each credit hour calls for at least three hours of shop work.

(2) In courses 1 and 2 students provide their own instruments and materials. A laboratory fee of three dollars per course will be charged for courses 3-9, inclusive.

1. CONSTRUCTIVE DRAWING. Essentials of constructive drawing from the educational usage viewpoint—lettering, reading and making working drawings, projection drawing, and the use of drawing tools. Visualization, the relation of information and technique, and constructive design. SOUTHWORTH.
2. MECHANICAL DRAWING. Applied machine drawing as based upon the study of fastenings and power transmission. Sketching, tracing, blueprinting, shading, tinting, elementary machine design and the use of hand and reference books. SOUTHWORTH.
3. WOODWORK. Typical elementary bench work suitable for the sixth, seventh, and eighth grades. Tool operation, tool use, typical materials of construction, working from drawings, individual design, and a study of the source of materials. Shop fee, \$3.00. SOUTHWORTH.
4. WOODWORK. This phase of the work will be based upon elementary cabinet work. The design and construction of typical projects will be studied. Joints, fastenings and wood finishes. Shop fee, \$3.00. SOUTHWORTH.
5. WOOD TURNING AND PATTERN MAKING. Use and care of the lathe, educational and commercial values of wood turning, spindle, screw chuck or face plate and hollow chuck or mandrel work. Elementary pattern work as adapted to the use of high schools. Shop fee, \$3.00. RICHARDS.
7. FORGE. The treatment of the fire, soft and hard iron, steel welding, hardening, tempering, annealing, tool making and one problem in decorative wrought iron from the student's own design. Shop fee \$3.00. QUIGLEY.
8. MACHINE SHOP. Chipping, filing, sheet iron and copper, the lathe, drill press, planer, milling machine, shaper, and the grinding machine. A simple machine will be designed and carried through the various shop processes, by the student. Shop fee, \$3.00. SHIPLEY.
9. CLAY, CEMENT, AND FOUNDRY. Clay—designing and decoration of clay objects; cement construction—flat, cored, and reinforced work; foundry work—the essentials necessary for school use. Shop fee, \$3.00. McMILLAN, QUIGLEY, SOUTHWORTH.
- 11-12. METHODS AND ORGANIZATION—TEACHERS' COURSE. Aims and organization of manual training, its place in the school curriculum, social, industrial, and psychological significance. Courses of study adaptable to different types of communities and school systems. A comparative and critical study of methods. SOUTHWORTH.

## TEACHER-LIBRARIAN TRAINING

Lecturer, MARTHA WILSON.

The satisfactory completion of the following courses will render a student eligible for a high-school teacher-librarian certificate. (See statement, page 22.)

No.	Title	COURSES			Prereq. courses
		Credits	Offered to		
1.	Elementary Library Methods for Teachers.....	1	Jr., sr.		None
2.	Library Organization.....	1	Jr., sr.		1
4.	Cataloging.....	1	Jr., sr.		1

1. ELEMENTARY LIBRARY METHODS FOR TEACHERS. Introductory course—problems of the high-school library, arrangement, selection of books, catalogs, book lists, methods of ordering books and library cards; training teachers to teach students the use of the high-school library. WILSON.
2. LIBRARY ORGANIZATION. Library organization, including classification, arrangement, and school library administration. WILSON.
4. CATALOGING. Definite training in elementary cataloging, the making of a dictionary catalog, and the use and adaptation of Library of Congress and other printed catalog cards. (Not offered in 1915-16). WILSON.

## HIGH SCHOOL RURAL TRAINING

Director, LOTUS D. COFFMAN; Lecturers, MABEL CARNEY, ALBERTA ACKERMAN, MAY H. DILLS, CORAL L. OSBORN.

## REQUIREMENTS OF THE DEPARTMENT

1. *For Admission.* (1) Two years of rural teaching experience; (2) Advanced diploma from a State Normal School. For exceptions, see statement, page 22.

2. *For Recommendation for State Endorsement.* For explanation, see page 13 of this bulletin.

Students who complete the following course will be eligible for recommendation for the endorsement of the State Department of Education as teachers of high-school rural training departments.

In the following course, Education is selected as a major. The two minors recommended are English and Economics. The Education courses, in *italics*, are all required, but previous training, experience and needs of the student may modify his choice of minors and of other electives. Normal School graduates are credited with the History of Education and Introductory Psychology, consequently these courses are not included in the following outline. (See also page 22.)

PRESCRIBED COURSE FOR HIGH SCHOOL RURAL TRAINING TEACHERS  
*Junior Year*

## First Semester

EDUCATION:	Credit
107. <i>Problems of the Training Department</i> (monthly lectures and conferences). Miss CARNEY. None	
3a. <i>Social Aspects of Education</i> ....	3

## PHILOSOPHY:

17. Methods of Study.....	3
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## ECONOMICS:

3a. Elements of Economics...	3
31. Phys. and Human Geog..	3

## ENGLISH:

1. General Survey.....	3
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## Second Semester

EDUCATION:	Credit
108. <i>Continuation of 107</i> .....	None
152. <i>Elem. Meth. in Reading</i> ...	1
154. <i>Elem. Meth. in Ind. Arts.</i>	1
156. <i>Elem. Meth. in Geography</i> .	1

## ECONOMICS:

18. <i>Rural Economics</i> .....	3
32. <i>Phys. and Human Geog.</i>	3

## ENGLISH:

2. General Survey.....	3
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## HOME ECONOMICS\*†.....

*Senior Year*

## First Semester

EDUCATION:	
107. <i>Problems of the Training Department</i> (monthly lectures and conferences). Miss CARNEY.. None	
111a. <i>Technique of Teaching</i> ....	3
123. <i>School Supervision</i> .....	3
153. <i>Elem. Meth. in English</i> ..	1
155. <i>Elem. Meth. in History</i> ..	1
157. <i>Elem. Meth. in Arithmetic</i> .	1

## ENGLISH:

63. <i>19th Century Literature</i> ..	3
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## AGRICULTURE\*:.....

## Second Semester

EDUCATION:	
108. <i>Continuation of 107</i> .....	None
110. <i>Rural School Curriculum</i> ..	2
142. <i>Industrial Education</i> ....	2
115. <i>Practice Teaching</i> .....	3

## PHILOSOPHY:

106. <i>Child Development</i> .....	3
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## ENGLISH:

122. <i>American Literature</i> ..	3
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Descriptions of all courses in above course not definitely referred to in footnotes will be found in the proper Departmental Statement.

\*Courses to be selected according to individual interests after conference with head of department.

†A course in Home Economics especially designed for teachers of high school training departments will be arranged in case the number of registrations and the community of needs of students warrants this.

## ANIMAL BIOLOGY

Professors HENRY FRANCIS NACHTRIEB, JOHN B. JOHNSTON, THOMAS S. ROBERTS, CHARLES P. SIGERFOOS; Associate Professor HAL DOWNEY; Assistant Professors ELMER J. LUND, OSCAR W. OESTLUND; Instructors GEORGE DELVIN ALLEN, CHARLES E. JOHNSON; Assistants ADOLPH RINGOEN, HELEN SANBORN; Teaching Fellow HERBERT E. METCALF.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.

*For a Major*, twenty-four credits.

*For B.A. with Distinction*, freshman year, Course 1-2; sophomore year, the student may elect from Courses 7-8, 15-16, 19-20, 23-24; during the junior year the student must elect from Courses 31 to 144, and must include some line of work begun in the sophomore year which he expects to pursue during the senior year under 161-162.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teacher's Certificate* an average of B in Courses 1-2, 31-32, 28, and nine other credits in Animal Biology and six credits in Botany.

## JOURNAL CLUB

The professors, instructors and advanced students of the department meet once a week to review and discuss current zoological literature and to listen to reports from those carrying on investigations.

## COURSES

*Introductory Courses*

No.	Title	Credits	Offered to	Prerequisites
1-2.	General Zoology.....	6†	All	None
7-8.	Histology-Embryology ...	6†	Soph., jr., sr.	1-2
12.	Histological Technique...	3	Soph., jr., sr.	1-2 and 7-8
15-16.	General Physiology.....	6†	Soph., jr., sr.	1-2
19-20.	Comparative Anatomy of Vertebrates .....	6†	Soph., jr., sr.	1-2
23-24.	Entomology .....	6†	Soph., jr., sr.	1-2
28.	Ornithology .....	3	Soph., jr., sr.	1-2
30.	Neurology .....	3	Soph., jr., sr.	1-2
31-32.	Nature Study.....	3	Jr., sr.	12 credits
51.	Protozoology .....	3‡	Jr., sr.	9 credits inc. 1-2
56.	Morphology of Inverte- brates .....	3‡	Jr., sr.	9 credits inc. 1-2
79.	Mammalogy .....	2	Jr., sr.	1-2 19-20

*Advanced and Graduate Courses*

101-102. Advanced Entomology....	6	Jr., sr., grad.	1-2, 23-24
115-116. Morphology of Vertebrates	6 or 12	Jr., sr., grad.	1-2, 7-8 or 19-20
119-120. Vertebrate Histology....	6	Sr., grad.	1-2, 7-8, 12
123-124. Blood of Vertebrates....	6 or 12 <sup>†</sup>	Sr., grad.	1-2, 7-8, 12, 137-138, reading knowledge of French and German.
125-126. Comparative Neurology...	6 <sup>†</sup>	Honors and grad.	7-8 or 19-20 and six other credits in Zoology or Human Anat.
131-132. Embryology .....	6 <sup>†</sup>	Jr., sr., grad.	1-2, 7-8
143-144. Genetics and Eugenics...	6	Sr., grad.	1-2, 7-8, 15-16
161-162. Problems .....	6 or 12	Sr., grad.	1-2 and other courses prescribed by department.

<sup>†</sup>Both semesters must be completed before credit is given for the first semester.

<sup>‡</sup>Courses 51 and 56 may be combined for a year-course.

31-32. NATURE STUDY—TEACHERS' COURSE. Discussions, reference, field and laboratory work, through the year, twice a week first semester or once a week second semester. Especially for the fitting of teachers in secondary schools. SIGERFOOS.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the 'Arts bulletin, pages 31-33.

## ART

It is expected that adequate opportunities for work in the fine arts and architecture will be offered to the students of this college in the near future. The following course is offered through the coöperation of the Minneapolis Society of Fine Arts. Mr. Breck, Director of the Minneapolis Institute of Arts, will lecture on Ancient Art; Miss Margaret T. Jackson, Director's Assistant at the Institute, on Christian, Romanesque, Gothic, and Renaissance Art; and Mr. Robert Koehler, Director Emeritus of the Minneapolis School of Art, on Art from the XVII Century to the present day.

**HISTORY OF ART:** A general survey of the history of Occidental Art from the earliest times to the present day. Two lectures a week and required reading. Second semester. Prerequisite, History 1-2 or twelve credits in Greek, Latin, or English.

## ASTRONOMY

Professor FRANCIS P. LEAVENWORTH; Assistant Astronomer WILLIAM O. BEAL.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, Courses 51-52 and 101-102 (the latter taken as a three-hour course) or Courses 13-14 and 101-102 (the latter taken as a three-hour course).

*For a Major*, Courses 21, 51-52, and 101-102 (the latter taken as a six-hour course), and Mathematics 4.

*For B.A. with Distinction*, the general requirements (page 14), Courses 51-52, 101-102 (as a six-hour course), and six credits in Physics.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

## ASTRONOMICAL OBSERVATORY

The Astronomical Observatory contains a ten and one-half-inch refracting telescope furnished with a third lens for converting it into a photographic telescope; a five-inch star camera; a filar micrometer; a spectroscope by Brashear; a meridian circle and zenith telescope; a Repsold photographic measuring machine; a chronograph, and astronomical clocks.

## COURSES

No.	Title	Credits	Offered to	Prereq. Courses
9-10.	Descriptive Astronomy..	3	Soph., jr., sr.	None
11a or 11b.	Descriptive Astronomy...	3	Soph., jr., sr.	None
13-14.	Descriptive Astronomy and Observatory Practice .....	6	Soph., jr., sr.	None
21.	Spherical Trigonometry with Applications.....	3	Soph., jr., sr.	Math. 1-2 and 6, or Math. 3-4 and 6
51-52.	General Astronomy.....	6	Jr., sr.	1 yr. Math.
62.	Elements of Practical Astronomy .....	3	Jr., sr.	1 yr. Math.
101-102.	Practical Astronomy....	6 or 12	Jr., sr.	Math. 7 and 11
140.	Method of Least Squares	2	Sr., grad.	Math. 51

All of the above courses receive credit in the College of Education. For description see College of Science, Literature and the Arts bulletin, pages 34 and 35.

## BACTERIOLOGY

Assistant Professor W. P. LARSON; Instructors, A. T. HENRICI, MARGARET WARWICK.

COURSES					
No.	Title	Credits	Offered to	Prerequisite	
58a or 58b. General	Bacteriology....	4	All	Gen. Chem. and either Zool. 1-2 or Bot. 1	
59. Special	Bacteriology....	3	All	Bact. 58	
104. Special	Bacteriological Technique .....	3	All	Bact. 58	

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, page 35.

## BOTANY

Professors FREDERIC E. CLEMENTS, CARL OTTO ROSENDAHL, JOSEPHINE E. TILDEN; Assistant Professors HERBERT F. BERGMAN, FREDERIC K. BUTTERS, NED L. HUFF; Assistants DONALD FOLSOM, FRANCES L. LONG, HARVEY STALLARD.

### REQUIREMENTS OF THE DEPARTMENT

For a Minor, 12 credits, of which not more than six credits may be in introductory courses.

For a Major, 24 credits.

For B.A. with Distinction, the general requirements (page 14); 36 credits in Botany, of which 24 shall be selected from advanced Courses 105-106 to 119-120 inclusive. Those electing this course are urged to secure 12 credits during the sophomore year.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

For a Teacher's Certificate, an average of at least one honor point for each credit hour in one introductory and one intermediate course, and in Course 121-122.

Students entering the department without preparation must take Course 1, followed by 2, 3b or 4. Students coming from an approved high school course must take Course 3a followed by 2 or 4. Those who expect to pursue botany for a single year only will take Course 3b or 4 during the second semester, while those who expect to take a major in botany are advised to take Course 2.

COURSES					
Introductory Courses					
No.	Title	Credits	Offered to	Prerequisite	
1a or 1b. General	Botany.....	3	All	None	
2. Structural	Botany.....	3	All	1 or 3a	
3a or 3b. Evolution	of Plants.....	3	All	1 or approved High School Botany	
4. Field and	Garden Botany	3	All	1 or 3a	

*Intermediate Courses*

No	Title	Credits	Offered to	Prereq. courses
5-6.	Plant Morphology.....	6	Soph., jr., sr.	6 credits: see statement
7-8.	Taxonomy .....	6	Soph., jr., sr.	6 credits: see statement
9-10.	Physiology and Ecology..	6	Soph., jr., sr.	6 credits
11-12.	Industrial Botany.....	6	Soph., jr., sr.	6 credits, inc. 2 or 3
13-14.	Mycology .....	6	Soph., jr., sr.	6 credits

*Advanced Courses*

103.	Foodstuffs and Textiles..	3	Jr., sr., grad.	9 credits
105-106.	Algae .....	6	Jr., sr., grad.	9 credits
107-108.	Mosses and Ferns.....	6	Jr., sr., grad.	9 credits, inc. 2 or 3, or 5-6
110.	Gymnosperms .....	3	Jr., sr., grad.	7-8 or 107-108
111-112.	Advanced Taxonomy.....	6	Jr., sr., grad.	7-8
113-114.	Advanced Ecology.....	6	Jr., sr., grad.	9-10
115-116.	Advanced Physiology.....	6	Jr., sr., grad.	9-10
117-118.	Cytology .....	6	Jr., sr., grad.	18 credits
119-120.	Advanced Industrial Botany .....	6	Jr., sr., grad.	11-12
121-122.	Plant Studies and Methods .....	6	Jr., sr., grad.	12 credits

121-122. PLANT STUDIES AND METHODS. The subject of nature study and high-school botany presented as they are to be taught; the material taken up in detail in proper sequence, and training in method afforded by practice in the University High School. CLEMENTS.

For description of all other courses see College of Science, Literature, and the Arts bulletin, pages 37-39.

## CHEMISTRY

Professors GEORGE B. FRANKFORTER, CHARLES F. SIDENER; Associate Professor EVERHART P. HARDING; Assistant Professors IRA H. DERBY, FRANCIS C. FRARY, WILLIAM H. HUNTER, EDWARD E. NICHOLSON; Instructors ROSS A. BAKER, FRANK W. BLISS, LILLIAN COHEN, J. GERHARD DIETRICHSON, WOLF KRITCHEVSKY, LILLIAN L. NYE, EARL PETTIJOHN, FREDERICK POPPE, WOLDEMAR STERNBERG, EARLE K. STRACHAN, STERLING TEMPLE; Assistants CURTIS W. APPLEBY, WALTER M. LAUER, R. D. MAY, H. A. MURTA, A. T. NEWMAN, ADOLPH NIETZ, A. O. UTNE.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.

*For a Major*, twenty-four credits.

In Chemistry the purpose of the honors course is served by the Five-Year Course in Arts and Chemistry. (See page 27, College of Science, Literature, and the Arts bulletin.)

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of

Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

For a Teacher's Certificate, an average of at least one and one-half honor points for each credit hour in Courses 1-2 or 3-4 and 7-8 or 11-12; and 20.

### COURSES

#### *Division of General and Inorganic Chemistry*

No.	Title	Credits	Offered to	Prereq. courses
1-2. General Chemistry.....	6†		Those entering without Chemistry	None
21-22. Inorganic and Qualitative Chemistry .....	10†		Those entering without Chemistry	None
3-4. Adv. Gen. Chem. and Qualitative Analysis....	6†		Fr., soph., jr.	Entrance credit in Chemistry
7-8. Qualitative Analysis.....	6†		Soph., jr., sr.	1-2
10. Glass Blowing.....	1		Jr., sr.	None
17. Inorganic Colloquium....	2		Sr.	11-12
20. Teachers' Course.....	2		Sr.	3-4 or 7-8, or 21-22
169-170. Chemistry of the Rare Elements .....	4†		Jr., sr.	11-12

#### *Division of Analytical Chemistry*

11-12. Quantitative Analysis....	8†	Soph., jr., sr.	3-4 or 7-8, or 21-22
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107-108. Advanced Quantitative Analysis .....	6†	Jr., sr.	11-12
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#### *Division of Organic Chemistry*

13-14. Medical Organic Chemistry .....	6	Soph.	3-4 or 7-8, or 21-22
18. Organic Colloquium.....	2	Sr.	35-36
35-36. Organic Chemistry.....	8†	Jr., sr.	3-4 or 7-8, or 21-22
115. Adv. Organic Chemistry.	2	Sr.	35-36
116. Theoretical Organic Chem.	2	Sr.	35-36

#### *Division of Physical Chemistry*

121-122. Physical Chemistry.....	4†	Jr., sr.	36-36 Physics 2 and 4
123-124. Physico-chemical Lab.....	2†	Jr., sr.	See statement
125-126. Adv. Physical Chemistry.	6†	Sr.	121-122
128. Radiochemistry .....	2	Jr., sr.	3-4 or 7-8, or 21-22 Physics 2 and 4

#### *Division of Technological Chemistry*

27-28. Chemistry in Every Day Life .....	4†	Jr., sr.	3-4 or 7-8, or 21-22
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*Division of Industrial Chemistry*

No.	Title	Credits	Offered to	Prereq. courses
15.	Photochemistry .....	2	Jr., sr.	3-4 or 7-8, or 21-22
16.	Color Photography.....	2	Jr., sr.	15
	†Both semesters must be completed before credit is given for the first semester			
20.	TEACHERS' COURSE. For those who expect to teach Chemistry. COHEN.			

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 40-42.

## COMPARATIVE PHILOLOGY

Professor FREDERICK KLAEBER.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, Courses 101, 102, 105, 108, 109, 110.

*For a Major*, Courses 101, 102, 105, 108, 109, 110, with German 3-4 (or 5-6) and 7-8 as prerequisites.

*For B.A. with Distinction*. The required credits in the major may be elected from the undergraduate courses of the department and English 8, 101, 103 and German 107-108.

This department, besides offering courses in the general principles of linguistic science, affords an opportunity for elementary studies in Comparative Indo-European Philology, and more particularly the investigation of Old Germanic dialects. Related courses in English Philology will be found under English Language and Literature.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

COURSES				
No.	Title	Credits	Offered to	Prereq. courses
101.	Science of Language.....	2	Jr.,sr., grad.	See statement
102.	Life of Words.....	2	Jr.,sr., grad.	Same as for 101
104.	Germanic Philology.....	2	Jr.,sr., grad.	Same as for 101
105.	Universal Language.....	2	Jr.,sr., grad.	Same as for 101
106.	Science of Language (Advanced) .....	2	Jr.,sr., grad.	Same as for 101
108.	Comparative Phonology..	2	Jr.,sr., grad.	German 7-8
109-110.	History of German Language .....	4†	Sr., grad.	German 53, 54

†Both semesters must be completed before credit is given for either semester.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, page 43.

## DRAWING AND DESCRIPTIVE GEOMETRY

Professor WILLIAM H. KIRCHNER; Assistant Professors FRANK B. ROWLEY, OTTO S. ZELNER; Instructors ROBERT W. FRENCH, LYALL DECKER.

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
21-22.	Technical Drawing.....	4	All	None

21-22. **TECHNICAL DRAWING.** Theoretical and practical graphics, the reading and making of working plans. Projection, sketching, lettering, conventions, renderings, and translations. KIRCHNER, FRENCH.

## ECONOMICS

Professors JOHN H. GRAY, E. DANA DURAND; Assistant Professors ROY G. BLAKELY, J. FRANKLIN EBERSOLE, THOMAS WARNER MITCHELL; Instructors LLOYD M. CROSGRAVE, H. G. HAYES, A. C. JAMES, ROBERT J. MCFALL; in the General Extension Division, Associate Professor CLARE L. ROTZEL; Assistant Professors GERHARD A. GESELL, CHARLES H. PRESTON; Instructor RAYMOND V. PHELAN.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits

*For a Major*, twenty-four credits, including Course 4.

*For B.A. with Distinction*, thirty credits in the major line of work with the usual supporting credits, and not less than sixty credits altogether in Group B (page 22).

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teacher's Certificate* in business subjects, a major in Economics, including Accounting and Economic Geography.

*Vocational Course in Business Education.* Freshmen who signify their intention of taking the proposed four-year vocational course in preparation for business (see College of Science, Literature, and the Arts bulletin, page 22) may elect Economics 1a the first semester followed by Economics 3b or Economics 2b, or both, the second semester. For these students 1a is prerequisite to 3b.

The departments of Economics, Political Science, History, and Sociology and Anthropology constitute a social science group. The subjects are intimately inter-related, and they are all of special importance to students who intend to engage in law, business, public service at home or abroad, journalism, the work of charities and corrections, or to give instruction in one of the social sciences. Students who are interested in the work of any one of the departments of the social science group **ought** to be familiar with at least the elements of the subjects offered in the other departments. A student who takes his major in any one of them **ought** to have more than the elements of the others.

## SUGGESTIONS AS TO COURSES IN THE DEPARTMENT

In order to aid students who have some idea as to their intended profession or calling to make a wise choice of courses, the accompanying tabular statement has been prepared.

These recommendations are merely suggestive and more courses are sometimes recommended than suffice to make up a technical minor or major in order that students may choose those courses which interest them the most.

Courses 3 and 4 are not included in these recommendations, as they must, in any case, precede the advanced courses, since they are required of all taking a major in Economics.

Students desiring merely a general acquaintance with Economics as part of a liberal education and as a preparation for citizenship are recommended to take the general courses and such others, amounting at least to a minor, as their interests may indicate.

## ECONOMICS

In preparation for	Courses advised for a minor	Additional advised for a major
Law	91, 22, 145, 146	43, 143, 73, 104
Public Service	2, 91, 145, 146	164, 35-6, 101
Consular and Diplomatic Service	2, 31-2, 13, 22, 71, 101	43, 143, 73, 34
Journalism	2, 91, 73, 145, 146, 43	164, 161, 101, 104, 143
Engineering or Railway Service	46, 73, 146, 145	161, 35-6, 34, 131
Chemistry or Manufactures	2, 15, 22, 31-2, 146, 161	34, 35-6, 131, 101
Mining	2, 72, 146, 161, 31-2, 143	13, 22, 141
Banking and Finance	43, 47, 101, 143, 145	42, 35-6, 138, 141, 144, 255-56
General Business	2, 13, 22, 31-2, 43, 143	23, 24, 34, 35-6, 141, 145
Forestry or Agriculture	13, 15, 17, 22, 31-2	35-6, 43, 73, 143, 251-2
Teaching Business Subjects	2, 13, 31-2, 43, 103	34, 35-6, 42
Medicine	2, 43, 164	42, 34, 35-6
Social Service Work	2, 161, 162	164, 104, 31-2, 261-62
The Ministry	2, 161, 162	164, 104, 31-2
Public Accountancy	35-6, 34, 132	131, 46, 47, 43, 141, 145, 146, 101, 253-54
Insurance	34, 35-6, 46, 47	23, 24, 145, 146, 141

## COURSES

## General Courses

No.	Title	Credits	Offered to	Prereq. courses
1a or 1b.	Indust. Hist. since 1750..	3	Soph., jr., sr.	None‡
3a or 3b.	Elements of Economics..	3	Soph., jr., sr.	None‡
4a or 4b.	Advanced Economics.....	3	Soph., jr., sr.	3
5.	Economic Development...	3	Soph., jr., sr.	None
31-32.	Physical and Human Geography .....	6†	Soph., jr., sr.	None
101.	Statistics .....	3	Jr., sr., grad.	6 credits inc. 3
104.	Hist. of Economic Ideas.	3	Jr., sr., grad.	3 and 4
105-106.	Economic Conference....	None	Sr., grad.	Accompanies seminars

## Production, Transportation and Commerce

2a or 2b.	Industries and Commerce of the United States...	3	Soph., jr., sr.	None‡
13.	Econ. Geography of Foreign Countries .....	3	Soph., jr., sr.	3 credits
15.	Forest Economics and Conservation .....	3	Jr., sr.	3
18.	Agricultural Economics..	3	Jr., sr.	3
251-252.	Seminar in Agr. Economics .....	6†	Sr.,grad.	3, 17. and 6 other credits in Economics or Farm Management
22.	Commercial Policies.....	3	Soph., jr., sr.	3
72.	Economics of Colonization	3	Jr., sr.	6 credits inc. 3
74.	Railway Problems.....	3	Jr., sr.	6 credits inc. 3

## Business Administration

34.	Business Management....	3	Soph., jr., sr.	3
35-36.	Accounting Principles....	6†	Soph., jr., sr.	None
37.	Marketing of Products...	3	Jr., sr.	3
38.	Advertising, Salesmanship and Commercial Credit.	3	Soph., jr., sr.	3
131.	Cost Accounting.....	3	Jr., sr., grad.	3 and 35-36
132.	Accounting Problems....	3	Jr., sr., grad.	3 and 35-36
133.	Accounting Systems.....	3	Sr., grad.	35-36, and 131 or 132
134.	Auditing .....	3	Sr., grad.	35-36, and 131 or 132
138.	Bank Administration.....	3	Jr., sr., grad.	3 and 43, and consent of instructor
253-254.	Seminar in Accounting...	6†	Sr., grad.	12 credits inc. 35-36; and 131

## Finance

42.	Financial History.....	3	Soph., jr., sr.	3
43a or 43b.	Banking .....	3	Soph., jr., sr.	3
46.	Property Insurance.....	3	Soph., jr., sr.	3
47.	Personal Insurance.....	3	Soph., jr., sr.	3
91.	Public Finance.....	3	Jr., sr.	6 credits inc. 3
92.	State and Local Taxation	3	Jr., sr.	91

No.	Title	Credits	Offered to	Prereq. courses
141.	Investment and Speculation .....	3	Jr., sr., grad.	3 and 43 or 143
143,	Money and Prices.....	3	Jr., sr., grad.	3 and 42 or 43
144.	Commercial Crises.....	3	Jr., sr., grad.	3 and 43 or 143
145.	The Modern Business Corporation .....	3	Jr., sr., grad.	6 credits inc. 3
146.	Public Utilities.....	3	Jr., sr., grad.	145
255-256.	Seminar in Money and Banking .....	6†	Sr., grad.	12 credits inc. 43
257-258.	Seminar in Econ. Development and Taxation..	6†	Sr., grad.	12 credits
259-260.	Seminar in Corporations.	6†	Sr., grad.	12 credits
<i>Economic Reforms</i>				
161.	Labor Problems.....	3	Jr., sr., grad.	3 and 4
163.	Economic Conditions in Cities .....	3	Jr., sr., grad.	6 credits inc. 3
164.	Economic Functions of the State .....	3	Jr., sr., grad.	6 credits inc. 3
165.	History and Theory of Socialism .....	3	Jr., sr., grad.	6 credits inc. 3
166.	Trade Unionism and Allied Problems.....	3	Jr., sr., grad.	6 credits inc. 3
168.	Wages .....	3	Jr., sr., grad.	164 or 166 and consent of instructor
261-262.	Seminar in Labor Problems .....	6†	Sr., grad.	161 or 163 and 164

†Both semesters must be completed before credit is given for the first semester.

‡See announcements concerning the proposed vocational course in business education on pages 22 and 44, College of Science, Literature, and the Arts Bulletin.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 47-52.

## ENGLISH

Professors RICHARD BURTON, HARDIN CRAIG, FREDERICK KLAEBER, ELMER E. STOLL; Assistant Professors JOSEPH W. BEACH, OSCAR W. FIRKINS, GEORGE N. NORTHRUP.

### REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits, including Course 1-2.

*For a Major*, twenty-four credits, including Course 1-2, 3, 5, 8, 55.

*For B.A. with Distinction*, the general requirements (see College of Science, Literature, and the Arts bulletin, page 22), a major in English, a reading knowledge of French, German, Italian, Greek, or Latin, and a final year's work in seminar for which a sequence shall have been specially arranged.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and

should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teacher's Certificate*, at least a minor in English and a minor in Rhetoric with an average of one and one-half honor points for each credit hour.

COURSES				
No.	Title	Credits	Offered to	Prereq. courses
1-2.	General Survey Eng. Lit.	6	Soph., jr., sr.	Rhet. 1-2
3.	Old English .....	3	Soph., jr., sr.	None
4.	Advanced Old English...	3	Soph., jr., sr.	3
5a or 5b.	Chaucer .....	3	Soph., jr., sr.	1-2
	6. Spenser .....	3	Soph., jr., sr.	1-2
	8. History of English Lan- guage .....	1	Jr., sr.	3
	55. Shakespeare .....	3	Jr., sr.	1-2
	56. Advanced Shakespeare...	3	Jr., sr.	55
59-60.	Modern Drama.....	6†	Sr.	1-2
	62. Milton .....	3	Jr., sr.	1-2
	63. 19th Century Literature.	3	Jr., sr.	1-2
	66. Browning-Tennyson .....	3	Jr., sr.	1-2
	67. English Novel.....	3	Jr., sr.	1-2
	72. English and Scottish Popular Ballads.....	3	Jr., sr.	1-2
	75. Recent English Poetry...	2	Jr., sr.	See statement
101.	Middle English .....	2	Jr., sr., grad.	1-2 and 3, or 3 and 4
	103. Piers the Plowman.....	2	Jr., sr., grad.	1-2 and 3, or 3 and 4
	105. 18th Century Poetry.....	3	Jr., sr., grad.	1-2
	107. 18th Century Prose.....	3	Jr., sr., grad.	1-2
	108. Romantic Movement.....	3	Jr., sr., grad.	1-2
109-110.	English Humorists .....	6	Jr., sr., grad.	1-2
111-112.	17th Century Prose.....	6†	Jr., sr., grad.	1-2
113-114.	Drama .....	6	Sr., grad.	12 credits
	115. English Idiom .....	2	Jr., sr., grad.	1-2
	118. Bible as Literature.....	3	Jr., sr., grad.	1-2
119-120.	Principles of Literary Criticism .....	6†	Jr., sr., grad.	1-2
	122. American Literature.....	3	Jr., sr., grad.	1-2
123-124.	Seminar in Novelists.....	4	Sr., grad.	See statement
125-126.	Biography .....	4	Sr., grad.	See statement
	128. 17th Century Drama.....	3	Jr., sr., grad.	55 or 131
130.	Teachers' Course.....	3‡	Jr., sr., grad.	See statement
	131. Elizabethan Drama.....	3	Jr., sr., grad.	55

†Both semesters must be completed before credit is given for the first semester.

‡Carries credit only in the department of Education.

130. TEACHERS' COURSE. Methods of teaching English in high schools. Course of study, textbooks, and equipment; visits to Minneapolis and St. Paul high schools; theme-correcting. Open to juniors, seniors, and graduates qualifying for Practice Teaching. Credit only in Education. INGLIS.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 57-60.

## GEOLOGY AND MINERALOGY

Professor WILLIAM H. EMMONS; Associate Professor CLINTON R. STAUFER; Assistant Professors FRANK F. GROUT\*, CHESSLEY J. POSEY; Instructors A. WALTER JOHNSTON, EDGAR K. SOPER; Assistant T. M. BRODERICK; Teaching Fellow J. P. GOLDSBERRY; in the General Extension Division, Assistant Professor EDWARD M. LEHNERTS.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.

*For a Major*, twenty-four credits. It is strongly recommended that a field course be included when this is practicable.

*For B.A. with Distinction*, Courses 11, 29, 105, 111, 124, and a field course; and twelve credits selected from the following courses:

- 57, 58, 108, 109 in Paleontology
- 65, 104, 136 in Mineralogy
- 106, 115 in Petrology
- 112, 124, 138, 144 in Economic Geology
- 106, 124, 112 in Structural Geology
- 31, 32, 116, 118 in Geography

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teacher's Certificate*, requirements the same as for a major, with an average of at least one and one-half honor points for each credit hour.

SEQUENCE OF COURSES IN DEPARTMENT OF GEOLOGY AND MINERALOGY FOR  
THOSE WHO PLAN TO TEACH PHYSIOGRAPHY OR GEOGRAPHY

*For a Major*

Required courses	Credits	Desirable re-enforcing courses
Geology 1 or 29 or 31.....	3	Geology 8
Geology 4 or 6.....	3	Geology 9
Geology 15a.....	1	Geology 11
Geology 15b.....	1	Geology 21, 22, 105
Geology 32.....	3	Geology 160 or 188
Geology 34.....	3	Geology 151
Geology 36.....	3	Geology 153
Geology 55.....	2	Physics 1-2
Geology 116 or 118.....	3	Botany or Zoology 1-2
Economics 12.....	3	Chemistry 1-2
		Courses in Economics, History, Sociology, Education

## For a Minor

Required courses	Credits	Desirable re-enforcing courses
Geology 1 or 29 or 31.....	3	Geology 4 or 6
Geology 36.....	3	Geology 8
Geology 118.....	3	Geology 15a
Geology 116, 34, 32 or Economics 12.....	3	Geology 15b
	—	Geology 9
	12	Geology 151
		Geology 153
		Geology 32 or 34 or 116 or Economics 12

SUGGESTED COURSE FOR ONE WHO EXPECTS TO TEACH PHYSIOGRAPHY  
OR GEOGRAPHY

	Credits	Course	Credits	Course
	FIRST SEMESTER		SECOND SEMESTER	
FRESHMAN:	3	Rhetoric 1	3	Rhetoric 2
	3	Chemistry 1	3	Chemistry 2
	5	German or French 1	5	German or French 2
	3	Mathematics 3	3	Mathematics 4
	3	History 3	3	History 4
SOPHOMORE:	3	<i>General Geology 1</i>	3	<i>Historical Geology 6</i>
	3	History 5	3	History 6
	3	German or French	3	German or French
	3	Botany or Zoology 1	3	Botany or Zoology 2
	3	Astronomy 11	3	<i>Meteorology 34</i>
	3	Economics 1a	3	Sociology 1b or 3b
JUNIOR:	3	Physics 1	3	Physics 2
	3	Economics 13	3	Economics 71
	3	History 151	3	History 182
	3	Education 3a	3	<i>Geography 36</i>
	3	<i>Mineralogy 27a</i>	3	<i>Geography 116</i>
	3	<i>Physical Geography 31</i>	3	<i>Human Geography 32</i>
	6	Summer Field Trip 160 or 188		
SENIOR:	3	Education 101	3	Education 120
	3	<i>Advanced Geology 151</i>	3	<i>Advanced Geology 152</i>
	3	Practice Teaching	3	<i>Geography 118</i>
	2	<i>Geol. (55) Teacher's Course</i>	3	Sociology or Economics or Education
	3	Sociology or Economics or Education	3	Psychology 14
	3	Psychology 5a		
		Total hours, 73		Total hours, 65

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
1.	General Geology.....	3	Soph., jr., sr.	None
3.	Laboratory Work.....	1	Soph., jr., sr.	Supports 1
4.	Geology of Minnesota..	3	Soph., jr., sr.	1
5.	Economic Geology.....	3	Jr., sr.	1
6.	Historical Geology.....	3	Soph., jr., sr.	1
8.	Historical Geology Laboratory .....	1	Soph., jr., sr.	Supports 4 and 6
10.	Elements of Paleontology .....	3	Soph., jr., sr.	1
11.	Paleontology .....	5	Jr., sr.	6

No.	Title	Credits	Offered to	Prereq. courses
15a or 15b. Minerals and Rocks....	1	Jr., sr.	1	
21-22. Elements of Mineralogy	6	Soph., jr., sr.	See statement	
27a or 27b. Outlines of Mineralogy.	1	Jr., sr.	None	
29. General Physiography....	3	Soph., jr., sr.	None	
31-32. Phys. and Human Geog- raphy .....	6 <sup>†</sup>	Soph., jr., sr.	None	
34. Meteorology .....	3	Soph., jr., sr.	1 or 29	
36. Geography of North America .....	3	Soph., jr., sr.	1 or 29	
55. Teachers' Course in Geography .....	2	Jr., sr., grad.	See statement	
57. Paleontology .....	3	Jr., sr.	6 and 10	
58. Paleontology .....	3	Jr., sr.	57	
61. Physical Mineralogy....	3	Jr., sr.	22	
65. Morphology of Minerals	3	Jr., sr.	22	
104. Crystal Measurement...	3	Jr., sr., grad.	65	
105a or 105b. Elements of Rock Study .....	3	Jr., sr., grad.	See statement	
106. Petrology .....	3	Jr., sr., grad.	105	
108. Paleontologic Practice..	3	Jr., sr., grad.	58	
109. Advanced Paleontology.	3	Jr., sr., grad.	58	
110. Advanced Paleontology.	3	Jr., sr., grad.	109	
111. Ore Deposits.....	4	Sr., grad.	6, 22, 105	
112. Problems in Ore Deposits	2	Sr., grad.	111	
115. Advanced Petrology....	3	Sr., grad.	106	
116. Geography of Latin America .....	3	Jr., sr., grad.	1, 29, or 31-32 and 3 credits in Geog.	
118. Geography of Eurasia..	3	Jr., sr., grad.	Same as for 116	
124. Structural and Metamor- phic Geology.....	3	Sr., grad.	6, 22, 105	
136. Advanced Mineralogy....	3	Jr., sr., grad.	22	
138. Testing Economic Min- erals .....	3	Jr., sr., grad.	6, 22, 105	
144. Interpretation of Geol- ogic Maps .....	3	Jr., sr., grad.	111	
151. Advanced General Geol- ogy .....	3	Jr., sr., grad.	6	
152. Advanced General Geol- ogy .....	3	Jr., sr., grad.	151	
160. Field Geology.....	6	Jr., sr., grad.	See statement	
188. Field Work in Geog- raphy .....	6	Jr., sr., grad.	1 or 29	

<sup>†</sup>Both semesters must be completed before credit is given for the first semester.

55. TEACHERS' COURSE IN GEOGRAPHY. A critical study of the materials and methods of teaching secondary school geography. The relation of human activities to environment will be emphasized. For teachers of high school geography. Six credits from the Department of Geology required as prerequisites; three from Courses 1, 29, 31; and three from Courses 36, 116, 118, 188. POSEY.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 62-65.

## GERMAN

Professor CARL SCHLENKER; Assistant Professors OSCAR C. BURKHARD, WALTER R. MYERS; Instructors JAMES DAVIES, J. THEODORE GEISSENDOERFER, ARTHUR R. GRAVES, ALFRED E. KOENIG, ROBERT P. MORE, THEOPHILUS H. SCHROEDEL, HAROLD W. SOULE, RICHARD WISCHKAEMPER; Teaching Fellow ARNOLD W. SHUTTER.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits not including Course 1.

*For a Major*, twenty-four credits.

*For B.A. with Distinction*, the general requirements (see College of Science, Literature, and the Arts bulletin, page 22.) Students doing major work in German must complete the following requirements for the junior and senior years: fifteen credits during the junior year in courses numbered between 51 and 100, of which Courses 53-54 and 55-56 are required; eight credits during the senior year, including at least one course numbered between 101 and 200, and one course numbered above 200; and the special thesis, to be completed under the direction of the instructor in charge of the latter course.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*Teacher's Certificate in German*. For a *minor* recommendation, courses 29-30, 53-54, 55-56, 59-60; for a *major* recommendation, in addition to the foregoing courses at least four other credits obtained in starred courses. In either case the student must have an average standing of one and one-half honor points for each credit hour for all German courses taken.

For courses in Germanic Philology see the statement of the Department of Comparative Philology.

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
1a or 1b. Beginning .....	6†	All	None	
2a or 2b. Intermediate .....	6	All	1	
3-4. Intermediate .....	6†	All	1 or equivalent	
7-8. Drama .....	6†	Fr., soph., jr., sr.	3-4, or 5-6, or 4 yrs. prep. German	
9-10. Historical Prose.....	6†	Fr., soph., jr., sr.	3-4, or 5-6, or 4 yrs. prep. German	
27-28. Elementary Conversation and Composition.....	4†	Fr., soph., jr.	See statement	
29-30. Advanced Conversation...	2†	Soph., jr., sr.	See statement	
31-32. Intermediate Composition.	2†	Soph., jr., sr.	See statement	

No.	Title	Credits	Offered to	Prereq. courses
51.	Faust I.....	2	Soph., jr., sr.	7-8, or 9-10, or 23-24
52.	Faust II.....	2	Soph., jr., sr.	51
53.	Survey .....	3	Soph., jr., sr.	7-8, or 9-10, or 23-24
54.	Survey .....	3	Soph., jr., sr.	53
55-56.	Advanced Composition...	2†	Jr., sr.	31-32
57-58.	Oral Diction.....	4†	Jr., sr.	See statement
59-60.	Teachers' Course.....	2†	Jr., sr.	29-30 and 53-54
61.	Romantic School.....	2	Jr., sr.	7-8, or 9-10, or 23-24
62.	Drama of Last Thirty Years .....	2	Jr., sr.	2 credits in starred courses
63.	Poetry of Classic Period (Schiller) .....	2	Jr., sr.	7-8, or 9-10, or 23-24
64.	Poetry of Classic Period (Goethe) .....	2	Jr., sr.	7-8, or 9-10, or 23-24
107-108.	Middle High German....	4†	Jr., sr., grad.	4 credits in starred courses
109-110.	History of German Language .....	4†	Sr., grad.	4 credits in starred courses
111-112.	16th Century Literature..	4†	Sr., grad.	4 credits in starred courses
113-114.	Lessing .....	4†	Sr., grad.	4 credits in starred courses
117-118.	Goethe .....	4†	Sr., grad.	4 credits in starred courses
119-120.	Drama of Schiller.....	4†	Sr., grad.	4 credits in starred courses
127-128.	18th and 19th Century Lyrics .....	4†	Sr., grad.	4 credits in starred courses
129-130.	German Novel.....	4†	Sr., grad.	4 credits in starred courses
131-132.	German Novelle.....	4†	Sr., grad.	4 credits in starred courses
133-134.	English Influences.....	4†	Sr., grad.	4 credits in starred courses
135-136.	Schiller's Aesthetic Theories .....	4†	Sr., grad.	4 credits in starred courses
137-138.	Grillparzer .....	4†	Sr., grad.	4 credits in starred courses
225-226.	Literary Problems Seminar	4†	Honors and grad.	
231-232.	Faust Seminar.....	4†	Honors and grad.	

†Both semesters must be completed before credit is given for either semester.

59-60. TEACHERS' COURSE. Lectures, readings, and reports: observation of classes. SCHLENKER.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 67-70.

## GREEK

Professors JOHN CORRIN HUTCHINSON, CHARLES ALBERT SAVAGE.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.*For a Major*, twenty-four credits (exclusive of Courses 59 to 64 inclusive).

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
1-2.	First-Year Greek .....	10†	All	None
3-4.	History and Epic Poetry....	6†	Soph., jr., sr.	1-2
7.	Dramatic Poetry.....	3	Soph., jr., sr.	3-4
51.	Philosophy .....	3	Jr., sr.	3-4
52.	Oratory .....	3	Jr., sr.	3-4
53-54.	Composition .....	2	Sr. .	51-52
101.	Lyric Poetry .....	3	Sr., grad.	51 or 52
102.	Tragedy .....	3	Sr., grad.	7 or 101
103.	The Septuagint.....	3	Sr., grad.	51
104.	The New Testament.....	3	Sr., grad.	51

*Courses open to all, no knowledge of Greek being required.*

61.	Greek Drama .....	1 or 2	Jr., sr.	None
62.	Greek Literature and Life..	2	Jr., sr.	None
63-64.	Greek Mythology .....	2	Jr., sr.	None
59-60.	Greek Archaeology .....	1 or 2	Jr., sr.	None

†Both semesters must be completed before credit is given for the first semester.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 71 and 72.

## HISTORY

Professors GUY STANTON FORD, WILLIAM STEARNS DAVIS, ALBERT BEEBE WHITE; Associate Professor WALLACE NOTESTEIN; Assistant Professors SOLON J. BUCK, AUGUST CHARLES KREY; Resident Lecturer, EDGAR E. ROBINSON; Teaching Fellows RUTH E. MARSHALL, ROY TOWNE.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.*For a Major*, twenty-four credits.*For B.A. with Distinction*, see general statement (page 14).

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teacher's Certificate*, eighteen credits in History, including at least three credits in intensive courses. In addition the student must take History 54.

The Departments of History, Economics, Political Science, Sociology and Anthropology constitute a social science group. The subjects are closely inter-related, and are of especial importance to students who intend to engage in law, business, public service at home or abroad, journalism, and the work of charities and corrections, or to give instruction in one of the social sciences. Students who are interested in any one of the departments of the social science group ought to be familiar with at least the elements of the subjects offered in the other departments. A student who takes his major in any one of them ought to have more than the elements of the others.

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
1-2.	Medieval and Mod. History .....	6	All	None
1b.	European History to Reformation .....	3	All	None
3-4.	English History to 1783..	6	All	2 yrs. prep. History (Am. Govt. may be inc.)
5-6.	American History.....	6	Soph., jr., sr.	6 credits
7.	English History, 1750-1915	3	Soph., jr., sr.	6 credits
9.	National Movements.....	3	Soph., jr., sr.	6 credits
10.	Nineteenth-Century Europe	3	Soph., jr., sr.	6 credits
13.	Medieval Civilization....	3	Soph., jr., sr.	6 credits
14.	Renaissance and Reformation .....	3	Soph., jr., sr.	6 credits
21.	Selected Topics in Greek History .....	3	Jr., sr.	9 credits
23.	Selected Topics in Roman History .....	3	Jr., sr.	9 credits
56-57.	Teachers' Course.....	3	Jr., sr.	See statement
101.	Revolutionary and Napoleonic Era .....	3	Jr., sr., grad.	9 credits
104.	The Near East.....	3	Jr., sr., grad.	9 credits
121-122.	History of Greece.....	6	Jr., sr., grad.	See statement
123-124.	History of Rome.....	6	Jr., sr., grad.	See statement
126.	History of Old Orient....	3	Jr., sr., grad.	9 credits
133-134.	Ancient Civilization.....	6	Jr., sr., grad.	See statement
143-144.	History of the Upper Mississippi and Minnesota.	6	Jr., sr., grad.	9 credits inc. 5-6
145.	History of American Diplomacy .....	3	Jr., sr., grad.	9 credits or a major in Political Science
146.	Civil War and Reconstruction .....	3	Jr., sr., grad.	9 credits
141-142.	The West in American History .....	3	Jr., sr., grad.	9 credits inc. 5-6
153-154.	Social and Economic History of United States..	6	Sr., grad.	12 credits or a major in Economics

No.	Title	Credits	Offered to	Prereq. courses
161.	English Parliament.....	3	Jr., sr., grad.	See statement
163.	English Judiciary.....	3	Jr., sr., grad.	See statement
171-172.	Germany since 1640.....	6	Sr., grad.	See statement
173.	Era of Reform in Prussian History .....	6	Sr., grad.	See statement
181.	English Backgrounds of Colonial History.....	3	Jr., sr., grad.	9 credits inc. 3-4
182.	English Colonization in America .....	3	Jr., sr., grad.	9 credits inc. 5-6 or 181.
184.	Stuart Period .....	3	Sr., grad.	12 credits inc. 3-4

56-57. THE TEACHING OF HISTORY AND GOVERNMENT. Open only to students who have eighteen credits in History, including a starred course. Deals chiefly with the practical problems of teaching history and government in the secondary schools. Students planning to teach government must have 9 credits in Political Science. KREY et al.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 74-76.

### HOME ECONOMICS

Professor JOSEPHINE T. BERRY; Assistant Professors MABEL B. TRILLING, MARION WELLER, LUCILE WHEELER, GRACE I. WILLIAMS; Instructors BESSIE E. BEMIS, HARRIET GOLDSTEIN, AMY P. MORSE, DOROTHY MOTL, ETHEL L. PHELPS; Lecturer MARTHA B. MOORHEAD.

#### REQUIREMENTS OF THE DEPARTMENT

For a Minor, six credits in the Food Study group (Courses 21 and 22), together with Physiology 3 and Bacteriology 58.

#### COURSES

No.	Title	Credits	Offered to	Prereq. courses
1a or 1b.	Textiles .....	2	All	None
11a or 11b.	Garment Making.....	3	All	None
13a or 13b.	Dressmaking .....	3	All	1, 11
21a or 21b.	Foods and Cookery....	3	All	Chem., 3, 7, or 21; along with Physiol. 3
22a or 22b.	Food Economics.....	3	All	21
33.	Home Care of the Sick.	1	All	Chem., 3, 7, or 21; Bacteriol. 58.
51a or 51b.	Drawing and Design....	3	All	None
53a or 53b.	Historic Ornament and Advanced Design.....	3	All	51

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, page 77.

## HUMAN ANATOMY

Professors CLARENCE M. JACKSON, JOHN B. JOHNSTON, THOMAS G. LEE, RICHARD E. SCAMMON; Associate Professor CHARLES E. ERDMANN; Instructors WILLIAM F. ALLEN, JAY A. MYERS.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.

*For a Major*, twenty-four credits.

Prerequisites in Animal Biology may be counted as a part of the work for a minor or major.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
3-4. Gross Human Anatomy.....	10	Soph., jr., sr.	An. Biol. 1-2	
51. Human Histology .....	5	Jr., sr.	An. Biol. 7-8	
52. Human Embryology.....	3	Jr., sr.	An. Biol. 7-8	
101. Human Neurology.....	3	Sr., grad.	Anat. 51 and 52, or An. Biol. 7-8 or 19-20	
* 114. Topographic Anatomy.....	3	Sr., grad.	3-4	
116. Foetal Anatomy.....	3	Sr., grad.	3-4 and 52 or An. Biol. 137	

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, page 78.

## HUMAN PHYSIOLOGY

Professor ELIAS P. LYON; Associate Professors RICHARD O. BEARD, FREDERICK H. SCOTT; Assistant Professor M. RUSSEL WILCOX; Instructors FRANCIS B. KINGSBURY, J. F. McCLENDON, C. J. V. PETTIBONE; Assistants ROY E. CRUZEN, LYLE J. ROBERTS.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits, which may include Animal Biology 1-2.

*For a Major*, Animal Biology 1-2 and eighteen credits, including Physiology 52, 53 and 54. In these eighteen credits may be included Anatomy 51 and Animal Biology 15-16.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

No.	Title	COURSES		Prereq. Courses
		Credits	Offered to	
3a or 3b.	Elem. Human Physiology.	3 <sup>†</sup>	All	1 yr. Chem.
4.	Elementary Physiology and Physiologic Chemistry..	3 <sup>†</sup>	All	1 yr. Biol. Elem. Chem. and Biol. or Anat.
52.	Physiologic Chemistry....	4	Jr., sr.	Organ. Chem.
53.	Physiol. Muscle, etc.....	4	Jr., sr.	An. Biol. 1-2
54.	Physiol. Nerv. Sys., etc..	4	Jr., sr.	An. Biol. 1-2
101.	Urinalysis: Advanced Methods .....	2	Jr., sr.	Physiol. 52
103.	Metabolism .....	2	Jr., sr.	Physiol. 52
105-106.	Physical Chem. of Cells and Tissues .....	3 or 6	Jr., sr., grad.	Organ. Chem. and An. Biol. 1-2
115-116.	Advanced Physiologic Chemistry .....	Ar.	Jr., sr., grad.	Ph. 52
117-118.	Advanced Physiology.....	Ar.	Jr., sr., grad.	Physiol. 53
120.	Physiology of Develop- ment .....	2	Jr., sr.	An. Biol. 1-2 or Phy. 3
125.	Foods and Practical Diet- etics .....	2	Jr., sr.	Gen'l Chem. and Qual. Anal and Phy. 3 or 4
127.	Seminar .....	1	Sr., grad.	Physiol. 53, 54

<sup>†</sup>Students may not receive credit for both Courses 3 and 4.

For a full list of courses offered by the department, see the Bulletin of the Medical School.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 79 and 80.

## LATIN

Professors JOSEPH B. PIKE, JOHN E. GRANRUD.

### REQUIREMENTS OF THE DEPARTMENT

For a Minor, Courses 5, 6, 57 and 58 for those entering with four years of Latin; Courses 1, 2, 5 and 6 for those entering with two or three years of Latin.

For a Major, eighteen credits for those entering with four years of Latin; twenty-four credits for all others.

For a Teacher's Certificate, Courses 5, 6, 57, 58, 101, and 102, with an average of at least one and one-half honor points per credit hour.

For B.A. with Distinction. The general requirements (page 14) and a fair reading knowledge of German or French or Greek. Six credits in Latin a semester during the junior and senior years are to be selected from Courses 57 to 204. (Students who do not desire a recommendation for teaching Latin may, by selecting courses that are given in alternate

years, secure enough work for the honors course without being obliged to take Courses 101 and 102.) Instead of taking all the work indicated above in Latin, the student may substitute six credits in Greek (third-year Greek or above), or six credits in Greek or Roman History, or six credits in ancient Philosophy.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

COURSES					
No.	Title	Credits	Offered to	Prereq.	courses
1.	Selections from Latin Authors .....	3†	All	2 or 3 yrs.	Latin
2.	Selections from Latin Authors .....	3†	All	2 or 3 yrs.	Latin
5.	Livy .....	3†	All	Courses 1 and 2 or 4 yrs.	Latin
6.	Plautus and Terence.....	3†	All	Courses 1 and 2 or 4 yrs.	Latin
57.	Horace .....	3†	Soph., jr., sr.	6	
58.	Pliny .....	3†	Soph., jr., sr.	57	
101.	Adv. Caesar.....	3	Jr., sr.	58	
102.	Adv. Virgil.....	3	Jr., sr.	58	
104.	Latin Writing .....	2	Jr., sr., grad.	58	
105.	Roman Elegy .....	3	Jr., sr., grad.	58	
106.	The Roman Novel.....	3	Jr., sr., grad.	58	
107.	Letters of Cicero.....	3	Jr., sr., grad.	58	
108.	Tacitus .....	3	Jr., sr., grad.	58	
110.	Roman Satire .....	3	Jr., sr., grad.	58	
9.	Roman Architecture.....	1	Jr., sr.	None	
10.	Roman Art .....	1	Jr., sr.	None	
201-202.	Lucretius .....	3	Grad. and honor stud.	Consult dept.	
203-204.	Seneca .....	3	Grad. and honor stud.	Consult dept.	

†Both semesters must be completed before credit is given for the first semester.

101. ADVANCED COURSE IN CAESAR—TEACHERS' COURSE. Selections from books five to seven of the Gallic War; the principles of indirect discourse; intermediate Latin composition; class drill and discussion of various problems connected with secondary school work in Latin. PIKE.

102. ADVANCED COURSE IN VIRGIL—TEACHERS' COURSE. An interpretation of selections from books seven to twelve of the Aeneid; review of portions of books one to six; the quantitative method of pronouncing Latin verse; metrical rendering of selected passages; class drill. PIKE.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 81-83.

## MATHEMATICS

Professor GEORGE N. BAUER; Associate Professor WILLIAM H. BUSSEY; Assistant Professors ROYAL E. SHUMWAY, HERMON L. SLOBIN, A. L. UNDERHILL; Instructors LINCOLN K. ADKINS, JAMES S. MIKESH.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve or sixteen credits according as the freshman course taken is three or five hours a week.

*For a Major*, twenty-four credits.

*For B.A. with Distinction*, the general requirements (page 14). In junior and senior years any courses above 50 may be presented, except course 54. In Astronomy, course 101-102, and in Physics, course 121-122, and with the consent of the major department other courses open only to juniors and seniors, may be presented.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*Requirements for a Teachers' Certificate*. Course 54; preparatory to Course 54 a student is required to choose some sequence of courses leading to and including Course 51; for possible sequences and prerequisites consult head of department. A student must secure an average of at least one and one-half honor points per credit hour through Course 51, and Course 54; and an average of at least one honor point per credit hour in all other courses taken in the department. Course 6 must be included if not offered for admission.

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
1.	Higher Alg., Part I.	5	Fr., soph.	El. Alg.
2a or 2b.	Alg. (cont.) and Pl. Trig. ....	5	Fr., soph.	1 or prep. Higher Alg.
3a or 3b.	Higher Alg., Part II	3	Fr., soph.	Prep. Higher Algebra
4a or 4b.	Trigonometry .....	3	Fr., soph.	3
6.	Solid Geometry.....	2	Soph., jr., sr., who have not had solid geom.	1-2, or 3-4
7.	Plane Analyt. Geometry .....	3	Soph., jr., sr.	2 or 4
9a or 9b.	Pl. and Solid Analyt. Geometry .....	5	Fr., soph., jr., sr.	2 or 4
11a or 11b.	Differential Calculus.	3	Soph., jr., sr.	7 or 9
21.	Spherical Trig. with Applications .....	3	Soph., jr., sr.	1 and 2 or 3 and 4, and Solid Geom.
51a or 51b.	Integral Calculus....	3	Jr., sr.	11

No.	Title	Credits	Offered to	Prereq. courses
54a or 54b. Teachers' Course....		2	Jr., sr.	11
62. Theory of Equations		3	Jr., sr.	11
101. Solid Anal. Geom- etry .....		3	Jr., sr., grad	11
102. Advanced Plane Anal. Geometry...		3	Jr., sr., grad.	11
104. Modern Synthetic Geometry .....		3	Jr., sr., grad.	11
106a or 106b. Differential Equations		3	Sr., grad.	51
107. Adv. Differential Calculus .....		3	Jr., sr., grad.	51
108. Adv. Integral Cal- culus .....		3	Jr., sr., grad.	51 and 101
119a or 119b. Modern Higher Alge- bra .....		3	Sr., grad.	51
125-126. Differential Geometry		6	Sr., grad.	51
127a or 127b. Infinite Series.....		3	Sr., grad.	17 credits be- sides Alg. and Trig.
140. Method of Least Squares .....		2	Sr., grad.	51

Freshmen who have an entrance credit in First Part Higher Algebra and who intend to specialize in Mathematics should take Course 2a the first semester and Course 9b the second semester, rather than Courses 3 and 4.

54a or 54b. **TEACHERS' COURSE.** Text and assigned readings. Special attention paid to the fundamental principles of Algebra and Geometry. SHUMWAY.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 84-86.

## MUSIC

### REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits, not including Courses 11-12 and 21-22.

*A Major* is offered only to those who take the four-year course in Arts and Music.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

For the curriculum of the four-year course in Arts and Music, leading to the degree of Bachelor of Arts in Music, see College of Science, Literature, and the Arts bulletin, page 24. The tabular statement and description of courses given below are for the guidance of other students in the College of Science, Literature, and the Arts who desire to elect Music.

Students entering the University for the purpose of studying Music, but not wishing to complete the course leading to a degree, must register for Courses 1-2 and two other three-hour subjects outside the Department of Music.

A Certificate of Proficiency in Music will be granted to students who, having completed the theoretical courses and two years of pianoforte, are able to play one of the standard concertos and, in addition, show marked musical ability.

#### COURSES

No.	Title	Credits	Offered to	Prereq. courses
1-2. Harmony .....	6	Jr., sr.	None	
3-4. Counterpoint .....	4	Jr., sr.	See statement	
5-6. Form and Composition.....	2	Jr., sr.	1-2, and 3	
7-8. Analysis .....	2	Jr., sr.	1-2	
9-10. History of Music.....	6	Jr., sr.	None	
11-12. Appreciation of Music.....	1	Jr., sr.	None	
13-14. Bach and Beethoven.....	4	Jr., sr.	None	
15. Acoustics .....	3	Jr., sr.	None	
17-18. Pianoforte .....	4 or 8	Jr., sr.	None	
19-20. Violin .....	4 or 8	Jr., sr.	None	
21-22. Voice .....	4	Jr., sr.	None	
23-24. Cello .....	4 or 8	Jr., sr.	None	
25-26. Other Orchestral Instruments	4 or 8	Jr., sr.	None	
27-28. Public School Music.....	6	Jr., sr.	See statement	
29-30. Normal Piano.....	4	Jr., sr.	2 yrs. of Piano	
31-32. Ensemble Playing.....	2	Jr., sr.	2 yrs. of Piano	
33-34. Chorus .....	2	Jr., sr.	None	
35-36. Orchestra .....	2	Jr., sr.	None	

**27-28. PUBLIC SCHOOL MUSIC.** This course is planned especially to prepare students for the positions of teachers and supervisors of music in public, high, and normal schools.

Entrance Requirements: Ability to play piano, sing well, and read readily. Four hours weekly in class, and one half day weekly spent in public school visiting. Practice-teaching is demanded. In addition, courses in piano, voice training, harmony, orchestra, history of music and appreciation of music are recommended. GIDDINGS.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 88 and 89.

#### PHILOSOPHY AND PSYCHOLOGY

Professor NORMAN WILDE; Associate Professor DAVID F. SWENSON\*; Assistant Professor HERBERT H. WOODROW; Professorial Lecturer JOSEPH PETERSON; Instructors J. F. DASHIELL, AUSTIN S. EDWARDS, CHESTER E. KELLOGG.

#### REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.

\*Absent on leave, 1915-16

For a Major, twenty-four credits, either in Philosophy or in Psychology. The following courses are classified under Philosophy: 9, 13, 51, 56, 65, 109, 121, 122, 124, 126, 127, 129-130, 134. A major in Philosophy must include Courses 9, 121, and 122, as well as a minimum of three, or a maximum of six, credits in the psychological group. The following courses are classified under Psychology: 1-2, 5, 17, 54, 56, 57, 101, 105, 106, 108, 109, 115-116; a major in Psychology must include Courses 1-2 and 101, as well as a minimum of three, or a maximum of six, credits from the philosophical group.

For B.A. with Distinction, besides the general requirements (page 22), a major in either Philosophy or Psychology, and twenty-four credits in starred courses.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

For University Teachers' Certificate, a general introductory course in Psychology is prerequisite for all courses in Education. This course carries no credit as an Education course.

### COURSES

#### Introductory Courses

No.	Title	Credits	Offered to	Prereq. courses
	1-2. General Psychology..	6	Soph.	None
5a or 5b.	Elements of Psychology .....	3	Soph., jr., sr.	None
9a or 9b.	Logic .....	3	Soph., jr., sr.	None

#### Continuation Courses

13.	Introduction to Philosophy .....	3	Jr., sr.	3 credits
17.	Methods of Study...	3	Jr., sr.	Course 5 or 1-2
51a or 51b.	Ethics .....	3	Jr., sr.	6 credits
54.	Psychology of Religion .....	3	Jr., sr.	6 credits inc. 5 or 1-2
55.	Psychological Interpretation .....	3	Jr., sr.	6 credits inc. 3 or 1-2
56.	Esthetics .....	3	Jr., sr.	6 credits
57.	Social Psychology...	3	Jr., sr.	6 credits inc. 5 or 1-2
65.	Philosophy of Religion .....	3	Jr., sr.	6 credits
101a or 101b.	Experimental Psych.	3	Jr., sr., grad.	1-2
105.	Mental Retardation..	2	Jr., sr., grad.	1-2
106.	Child Development..	3	Jr., sr., grad.	1-2
108.	Comparative Psychology .....	3	Jr., sr., grad.	101
109.	Psychological Principles .....	3	Sr., grad.	12 credits inc. 9 and 1-2

No.	Title	Credits	Offered to	Prereq. courses
115-116.	Seminar in Psychology .....	6	Sr., grad.	12 credits in Psychology
121.	Ancient Philosophy..	3	Jr., sr., grad.	6 credits
122.	Modern Philosophy..	3	Jr., sr., grad.	6 credits
124.	Nineteenth Century Philosophy .....	3	Sr., grad.	12 credits in Philosophy
126.	Logic of Science....	3	Jr., sr., grad.	9 credits, inc. Course 9
127.	Metaphysics .....	3	Sr., grad.	12 credits
129-130.	Seminar in Philosophy .....	6	Sr., grad.	12 credits in Philosophy
134.	Philosophy of Plato..	3	Sr., grad.	121 or 122 or 124

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 90-92.

## PHYSICAL EDUCATION

### FOR MEN

Director LOUIS J. COOKE; Assistant Director WILLIAM K. FOSTER; Instructor JOHN C. WEST; Assistant N. W. JOHNSTON.

#### GENERAL STATEMENT

The purpose of the department is to provide all men of the University opportunity for exercise in order to maintain and build up their general health. It also provides special training for the correction of physical defects and functional derangements.

A physical examination is required of all new matriculants, and of all others using the department privileges, at the beginning of the year, and as often during their college course as their physical condition may indicate. Students taking the required work in physical education are examined also at the close of the year. A study of these records shows a marked improvement in the standard of health of the average student during his college course.

The gymnasium, swimming pool, and baths are open to all students of the University, who are free to use the apparatus and to pursue a course in physical training under the supervision of the director and his assistants.

Those students, taking the required course in physical education who can not swim, must make a reasonable effort, as determined by the department, to pass the swimming and life-saving requirements, and will be assigned special hours for instruction.

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
1.	Personal Hygiene.....	None	All	None
3-4.	Gymnastics .....	None	Fr.	None
5-6.	Intermediate Gymnastics....	None	Fr.	See statement
7-8.	Advanced Leaders.....	2 <sup>†</sup>	Soph., jr., sr.	1, 3-4, 5-6
9-10.	Corrective Gymnastics.....	None	All	None
11-12.	Wrestling .....	None	Soph., jr., sr.	3-4
13-14.	Advanced Gymnastics.....	None	Soph., jr., sr.	3-4
15-16.	Intermediate Swimming.....	None	All	None
17-18.	Advanced Swimming.....	None	All	15-16

<sup>†</sup>Both semesters must be completed before credit is given for the first semester.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 93 and 94.

## PHYSICAL EDUCATION

## FOR WOMEN

Assistant Professor J. ANNA NORRIS; Instructors MAY S. KISSOCK, EDITH G. RAYNOR, VALERIA LADD.

## INTRODUCTORY STATEMENT

This department aims to look after the health of the women students. It gives physical examination and advice to all newly entering students; conducts systematic yearly consultations with, and examines when necessary, all upper class students; gives courses in hygiene, organizes physical work to meet the various needs and physical tastes of students; coöperates closely with the Woman's Athletic Association in encouraging and organizing athletic sports; investigates cases of illness in dormitory and boarding houses.

Office open at regular hours to all students who desire consultation regarding their physical condition.

Work in this department is required of all newly entering students (see Courses 1-2 and 11), and of all students permitted, for reasons connected with their physical condition, to carry less than the minimum number of credit hours. Physical examinations or consultations required annually of all students.

Elective work without credit arranged in social dancing, gymnastic dancing, swimming, fencing, basket-ball, baseball, skating, etc. Students' standing not recorded in Registrar's office, but department takes responsibility of dropping from class such students as do not meet standards of class. Shower bath fees are attached to courses in gymnastic dancing (\$1.00 per semester for elementary, \$.50 for advanced) and to basket ball (\$.50 for season).

A large, new, well-equipped gymnasium will be ready for use in the autumn of 1915.

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
1-2.	Elementary Physical Training.	..	All. Required of all fr.	None
3-4.	Intermediate Physical Training	3	Soph., jr., sr.	Equivalent of 1- 2
5-6.	Advanced Physical Training...	3	Jr., sr.	3-4
11.	Preliminary Hygiene.....	3	Required of all new students.	None
13.	Personal Hygiene.....	3	Soph., jr., sr.	An. Biol. 1-2
14.	Hygiene of the Family.....	3	Sr.	Course 13

\*Six credits the maximum number that can be gained by taking courses in exercise (courses 3-4, 5-6); only one of these courses may be taken for credit in a semester.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, page 95.

## PHYSICS

Professors HENRY A. ERIKSON, ANTHONY ZELENY\*; Associate Professor ALOIS F. KOVARIK; Assistant Professor LOUIS W. MCKEEHAN; Instructors E. O. DIETERICH, ARTHUR F. GORTON, EARLE H. KENNARD, PAUL E. KLOPSTEG, OTTO J. ZOBEL.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.

*For a Major*, twenty-four credits.

*For B.A. with Distinction*, the general requirements (page 14); Courses 13 and 14; work chosen from any courses above 50, except 89-90; mathematics 106, 107, 108, 140, and any course in mathematics open only to juniors and seniors if approved by the department. Thesis in connection with any course in Physics above 150.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teacher's Certificate*, fifteen credits, including Courses 89 and 90.

Sequence of courses suitable for the preparation of high-school teachers in Physics: General Physics, Courses 1, 2, 3, 4 or 7, 8, 9, 10; Course 81, Physical Manipulation and Laboratory Technique; Course 31, Acoustics; Course 52, Light; Course 89-90, Teachers' Course.

## COURSES

No.	Title	Credits	Offered to	Prereq. courses
1.	General Physics.....	3	Soph., jr., sr.	Math. 2 or 4, or registration in Math. 2 or

No.	Title	Credits	Offered to	Prereq. courses
2.	General Physics.....	3	Soph., jr., sr.	1
3.	General Laboratory Practice .....	1	Soph., jr., sr.	See statement
4.	General Laboratory Practice .....	1	Soph., jr., sr.	See statement
7.	General Physics for Engineers .....	4	Soph., jr., sr.	Math. 2 or 4, see statement
8.	General Physics for Engineers .....	4	Soph., jr., sr.	7. See statement
9.	Gen. Lab. Practice for Engineers .....	1	Soph., jr., sr.	See statement
10.	Gen. Lab. Practice for Engineers .....	1	Soph., jr., sr.	See statement
13.	Electrokinetics .....	3	Jr., sr.	(12) 1914-15
31.	Acoustics .....	3	Soph., jr., sr.	See statement
52.	Light .....	3	Jr., sr.	4 or 10, and Math. 11
81.	Physical Manipulation and Laboratory Technique..	2	Jr., sr.	4, 10 or 14
82.	Physical Instruments of Precision .....	2	Jr., sr.	81
89-90.	Teachers' Course.....	2	Sr.	1-4, or 7-10, or 11-14
121-122.	Dynamics .....	6	Jr., sr., grad.	2 or 10 or (12) and Math. 51
155.	Spectrometry .....	3	Sr., grad.	52 and 82
161.	Advanced Electricity and Magnetism .....	3	Jr., sr., grad.	13
162.	Electrical Measurements..	2	Jr., sr., grad.	13
165.	Electrical Measurements of Precision.....	3	Sr., grad.	162
177.	Radioactivity .....	3	Sr., grad.	13 and Math. 11
178.	Radioactivity Measurements .....	3	Sr., grad.	177
181.	Adv. Physical Measurements .....	3	Sr., grad.	82
182.	Adv. Physical Measurements .....	3	Sr., grad.	181
191.	Elementary Physical Investigation .....	3	Sr., grad.	82
192.	Elementary Physical Investigation .....	3	Sr., grad.	191

†Carries credit only in Department of Education.

89-90. TEACHERS' COURSE. Methods of presentation; selection of lecture and laboratory experiments; laboratory management. Open to seniors who have taken a general course in physics. TOWNE.

For the year 1915-16 this course is given only in the Department of Education.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 96-99.

## POLITICAL SCIENCE

Professors WILLIAM A. SCHAPER, JEREMIAH S. YOUNG; Associate Professor CEPHAS D. ALLIN; Assistant BENJAMIN W. PALMER.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.

*For a Major*, twenty-four credits.

*For B.A. with Distinction*, see general requirements (page 14).

*For Teacher's Certificate* in Government, nine credits in Political Science and eighteen credits in History.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

The Departments of Economics, Political Science, History, and Sociology and Anthropology constitute a social science group. The subjects are intimately inter-related, and they are all of especial importance to students who intend to engage in law, business, public service at home or abroad, journalism, the work of charities and corrections, or to give instruction in one of the social sciences. Students who are interested in the work of any one of the departments of the social science group ought to be familiar with at least the elements of the subjects offered in the other departments. A student who takes his major in any one of them ought to have more than the elements of the others.

## COURSES

*Introductory Courses*

No.	Title	Credits	Offered to	Prereq. courses
1a or 1b.	American Government....	3	Soph., jr., sr.	None

*General Courses*

3.	Comparative Government.	3	Soph., jr., sr.	1
5.	European Municipal Ad- ministration .....	3	Soph., jr., sr.	1
6.	American Municipal Ad- ministration .....	3	Soph., jr., sr.	1
7a or 7b.	State and Local Govern- ment .....	3	Soph., jr., sr.	1
9.	Colonial Administration..	3	Soph., jr., sr.	1
51.	Business Law, I.....	3	Jr., sr.	6 credits in Pol. Sci., or 6 in Econ., or 3 in each
52.	Business Law, II.....	3	Jr., sr.	*51
54.	Latin American Relations	3	Jr., sr.	6 credits

*Special Courses*

No.	Title	Credits	Offered to	Prereq. courses
25.	American Gov't. (Engineers) .....	2	Sr.	None
26.	Commercial Law (Engineers) .....	2	Sr.	25
27.	American Gov't. (Agriculture) .....	3	Soph., jr., sr.	None
56-57.	Teachers' Course.....	3	Jr., sr.	See statement

*Advanced Courses*

101.	Constitutional Law.....	3	Jr., sr., grad.	6 credits
102.	Modern Political Thought	3	Jr., sr., grad.	6 credits
104.	Political Parties.....	3	Jr., sr., grad.	6 credits or 1 and History 5-6
105.	Comparative Administration .....	3	Jr., sr., grad.	6 credits
106.	Legislative Power and Methods .....	3	Jr., sr., grad.	6 credits
108.	Police Power.....	3	Jr., sr., grad.	6 credits
109.	Diplomacy .....	3	Jr., sr., grad.	6 credits or 1 and History 156
110.	International Law.....	3	Jr., sr., grad.	1 and 3, or 109
112.	Comparative Federal Gov't	3	Jr., sr., grad.	6 credits
114.	Government of the British Empire .....	3	Jr., sr., grad.	6 credits, or 1 and History 7
201-202.	Seminar .....	6	Sr., grad.	12 credits

56-57. TEACHERS' COURSE. Lectures on teaching Government in the secondary schools, given in coöperation with the Department of History and credited as part of History 56-57. SCHAPER.

All of the above courses receive credit in the College of Education. For description see College of Science, Literature, and the Arts bulletin, pages 99-102.

## RHETORIC AND PUBLIC SPEAKING

Professors JOSEPH M. THOMAS, MARGARET SWEENEY; Assistant Professors DANIEL FORD, CHARLES W. NICHOLS, SIDNEY F. PATTISON, ANNA H. PHELAN, FRANK M. RARIG; Instructors OLIVE M. GILBREATH, HALDOR GISLASON, JAMES T. HILLHOUSE, CHARLES E. SKINNER, ARTHUR J. TIEJE, HOWARD T. VIETS, HELEN A. WHITNEY, .....

## REQUIREMENTS OF THE DEPARTMENT

*For a Major*, twenty-four credits, which may include not more than six credits in Public Speaking.

*For a Minor in Rhetoric*, twelve credits in addition to Course 1-2, including Course 11-12 or 15-16.

*For a Minor in Public Speaking*, twelve credits in Public Speaking.

*For B.A. with Distinction*, the general requirements (page ..). A reading knowledge of either Latin, French, or German. At least fifteen credits in departmental starred courses (see College of Science, Literature, and the Arts bulletin), six of these credits to be in Course 119-120.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teachers' Certificate*, at least a minor in Rhetoric and a minor in English, with an average of one and one-half honor points for each credit hour.

Students expecting to qualify for Practice Teaching should follow one or the other of the courses in Rhetoric outlined below.

(a) *Minor Sequence*: Courses 1-2, 11-12, 41-42.

(b) *Major Sequence*: to consist of the courses outlined above and in addition six credits (to be earned during the senior year) chosen from the following: Courses 102, 103-104, 107, 110, 111-112, 16.

#### COURSES

No.	Title	Credits	Offered to	Prereq. courses
1-2.	Composition and Rhetoric	6	Fr.	None
1b.	Composition and Rhetoric	3	Fr.	None
2a.	Composition and Rhetoric	3	Fr.	None
3-4.	Composition for Engineers	6	Fr. Eng.	None
11-12.	Exposition, Description, Narration .....	6	Soph., jr., sr.	1-2
15-16.	Exposition and Argument	6	Soph., jr., sr.	1-2
31-32.	Technical Writing.....	4	Sr., Engineers	3-4
41-42.	Public Speaking.....	6	Soph., jr., sr.	1-2
45-46.	Argumentation and Debate	6	Soph., jr., sr.	See statement
47.	Advanced Debate.....	3		See statement
81-82.	Interpretative Reading...	6	Jr., sr.	1-2, 41-42
83-84.	Advanced Public Speaking	6	Jr., sr.	1-2, 41-42
102.	Versification .....	3	Jr., sr., grad.	1-2, 11-12 or 15-16
103-104.	Studies in Structure and Style .....	6	Jr., sr., grad.	1-2, 11-12 or 15-16
107.	Imitative Writing.....	3	Jr., sr., grad.	1-2, 11-12 or 15-16
110.	Short-Story Writing.....	3	Jr., sr., grad.	1-2, 11-12 or 15-16
111-112.	Essay Writing.....	6	Jr., sr., grad.	1-2, 11-12 or 15-16
115-116.	Dramatic Technique.....	4	Sr., grad.	See statement
119-120.	Seminar in Writing.....	4	Sr., grad.	See statement
130.	Teachers' Course.....	3†	Jr., sr., grad.	See statement
201-202.	Seminar in Rhetoric.....	6	Sr., grad.	See statement

†Carries credit only in the department of Education.

130. **TEACHERS' COURSE.** Methods of teaching English in the high schools. Discussion of course of study, textbooks, and equipment. Visits to Minneapolis and St. Paul high schools. Practical work in theme-correcting. Open to those who have completed, or are completing, a minor in Rhetoric and a minor in English and are qualifying for Practice Teaching. This course carries credit only in the department of Education. INGLIS.

For description of all other courses, see College of Science, Literature, and the Arts bulletin, pages 102-106.

#### PUBLIC SPEAKING

*Honorable Mention in Public Speaking.* Students who have won honors in debate or oratory, if the department deems them worthy, may receive honorable mention on the commencement program. To be eligible for such distinction a student must (1) have represented his class in the freshman-sophomore debate, or won a place in the freshman-sophomore oratorical contest; (2) have taken part in an inter-society debate; (3) have represented the University in an intercollegiate debate, or won a place in the Pillsbury oratorical contest.

#### ROMANCE LANGUAGES

Professors EVERETT WARD OLMSTED, COLBERT SEARLES; Assistant Professor JULES T. FRELIN; Instructors HARRY E. ATWOOD, NELSON F. COBURN, MARCEL MORAUD, CHARLES E. MULLER, RUTH S. PHELPS, EDWARD H. SIRICH; Teaching Fellows GEORGE S. BARNUM, EARL A. BARRETT.

#### REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits not including Course 1.

*For a Major*, twenty-four credits not including Courses 1 and 3.

*For B.A. with Distinction.* General requirements (page 14); a reading knowledge of Latin or German, and two years' work in Spanish or Italian. In the junior year, Courses 55-56, 101-102, 51-52, 53-54; in the senior year, courses 103-104, 107-108, 111-112, 113-114. Substitutions for these courses may be granted by the department in special cases. Alteration of courses required in the junior and senior years is allowable.

*Starred Courses.* The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teacher's Certificate.* In addition to course 5-6, which presupposes courses 1 and 3, two Conversation-Composition courses, two literary courses, and reinforcing work in Spanish as a minimum.

## COURSES

No.	Title	Credits	Offered to	Prerequisites
1a or 1b.	Beginning French.....	6	Fr., soph., jr., sr.	None
3a or 3b.	Intermediate French....	6	Fr., soph., jr., sr.	1 or equivalent
5-6.	Gen. Survey Fr. Lit...	6	Fr., soph., jr., sr.	3 or equivalent
7-8.	Elementary Fr. Conver...	2	Fr., soph., jr., sr.	3 or equivalent
9-10.	Elementary Fr. Compos.	2	Fr., soph., jr., sr.	3 or equivalent
31a or 31b.	Beginning Spanish.....	6	Fr., soph., jr., sr.	None
33-34.	Beginning Spanish.....	6	Fr., soph., jr., sr.	None
35-36.	Intermediate Spanish....	6	Fr., soph., jr., sr.	31 or equivalent
37-38.	Elementary Span. Conver.	2	Fr., soph., jr., sr.	35-36 or equivalent
39-40.	Elementary Span. Compos.	2	Fr., soph., jr., sr.	35-36 or equivalent
41-42.	Beginning Italian.....	6	Fr., soph., jr., sr.	None
†43-44.	Intermediate Italian....	4	Soph., jr., sr.	41-42 or equivalent
51-52.	Advanced French Conversation .....	2	Soph., jr., sr.	7-8 or equivalent
53-54.	Advanced French Composition .....	2	Soph., jr., sr.	9-10 or equivalent
55-56.	French Lit. Nineteenth Century .....	4	Soph., jr., sr.	5-6 or equivalent
101-102.	French Lit. Eighteenth Century .....	6	Jr., sr., grad.	5-6 or equivalent
103-104.	French Lit. Seventeenth Century .....	6	Jr., sr., grad.	5-6 or equivalent
† 105-106.	French Lit. Sixteenth Century .....	4	Jr., sr., grad.	101-102 or 103-104 or equivalent
107-108.	French Lit. Classicism.	4	Jr., sr., grad.	103-104 or equivalent
109-110.	Lectures in French....	6	Jr., sr., grad.	5-6; 51-52 or equivalent
111-112.	French Oral Diction....	4	Jr., sr., grad.	51-52 or equivalent
113-114.	French Syntax and Composition .....	2	Jr., sr., grad.	52-54 or equivalent
131-132.	Spanish Novel.....	4	Jr., sr., grad.	33-34 or equivalent
141-142.	Dante, Petrarch, Boccaccio .....	4	Jr., sr., grad.	41-42 or equivalent

†Not offered in 1915-16

Note: Courses 7-8 and 9-10 must be taken together.

Courses 51-52 and 53-54 must be taken together.

Courses 1, 3 and 31 are double courses.

Students are advised to take Course 55-56 as a natural preparation for Courses 101-102 and 103-104.

Permission to register for Courses from 55-56 to 109-110 inclusive may be granted by the department in special cases.

Both semesters of any year-course must be completed before credit is allowed for the first semester.

## SCANDINAVIAN

Professors GISLE BOTHNE, ANDREW A. STOMBERG.

### REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits, not including Courses 1-2 and 5-6.

*For a Major*, twenty-four credits.

*For B.A. with Distinction*, the general requirements (page 14) and one year of Scandinavian in addition to what is required for a major.

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For a Teachers' Certificate*, twelve credits in addition to Course 110.

### COURSES

No.	Title	Credits	Offered to	Prereq. courses
1.	Beginning Norwegian....	6	All	None
2.	Advanced Norwegian....	6	Soph., jr., sr.	1
3-4.	Advanced Norwegian....	6†	Soph., jr., sr.	1
5.	Beginning Swedish.....	6	All	None
6.	Advanced Swedish.....	6	Soph., jr., sr.	5
7-8.	Advanced Swedish.....	6†	Soph., jr., sr.	5
9.	Beginning Norwegian....	2	See statement	None
10.	Advanced Norwegian....	2	See statement	9
101-102.	Modern Norwegian Literature .....	6†	Jr., sr.	1-2 and 3-4
103.	Earlier Norwegian Literature .....	3	Sr., grad.	101-102
104.	Henrik Ibsen .....	2	Sr., grad.	101-102
107-108.	Swedish Literature.....	6†	Jr., sr., grad.	5 and 6
110.	Teachers' Course in Norwegian .....	2	Sr., grad.	1 and 2 or 5 and 6
113-114.	Old Norse (Icelandic)...	4	Sr., grad.	See statement

†Both semesters must be completed before credit is given for the first semester.

110. TEACHERS' COURSE IN NORWEGIAN. For students who expect to teach Norwegian in the high schools. BOTHNE.

For description of all other courses see College of Science, Literature, and the Arts bulletin, pages 109-111.

## SOCIOLOGY AND ANTHROPOLOGY

Professors ALBERT ERNEST JENKS, ARTHUR J. TODD; Instructor PAUL I. NEERGAARD; Lecturers FRANK J. BRUNO, OTTO W. DAVIS, CHARLES C. STILLMAN, GEORGE EDGAR VINCENT; Superintendents of State Board of Control Institutions.

## REQUIREMENTS OF THE DEPARTMENT

*For a Minor*, twelve credits.

*For a Major*, twenty-four credits.

*For B.A. with Distinction*, see general requirements (page 14).

*Starred Courses*. The College of Education has as yet adopted no system of starred courses. Nevertheless, candidates for the degree of Bachelor of Arts with Distinction will in some cases be obliged, in order to meet the departmental requirements, to be guided by this system and should therefore consult the departmental statements in the Science, Literature, and the Arts bulletin.

*For Recommendation for Teaching*, credits in the following courses: 1, or 3, 5, 113, 114, 117.

*For Recommendation for Social Work*, credits in the following courses: 1, 9 or 10, 113, 114.

Modern university education is not complete unless the graduate has obtained the social point of view. To this end the Department offers elementary courses dealing with peoples, with social forces, institutions, and movements. Its more advanced courses are designed especially for students majoring in the Social Sciences; namely, Economics, History, Political Science, and Sociology and Anthropology.

## COURSES

*Introductory Courses*

No.	Title	Credits	Offered to	Prereq. courses
1a or 1b.	Introduction to Anthropology .....	3	Soph., jr., sr.	None
3a or 3b.	Introduction to Sociology. ....	3	Soph., jr., sr.	None
5.	Cultural Anthropology....	3	Jr., sr.	None

*Special Courses*

7. Studies in Social Psychology .....	None	Stud. in dept.	None
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*General Courses*

9. Poverty .....	2	Jr., sr.	1 or 3
10. Poverty (continued).....	2	Jr., sr.	1 or 3
11. Housing Problems.....	2	Jr., sr.	1 or 3, and one other course
12. Ethnology .....	3	Jr., sr.	1 and one other course
14. Rural Sociology.....	3	Jr., sr.	1 or 3

*Advanced Courses*

102. Social Theory.....	3	Jr., sr., grad.	1 or 3, 9 or 10, and one other course
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No.	Title	Credits	Offered to	Prereq. courses
104.	State Board of Control Institutions .....	2	Jr., sr., grad.	1 or 3, 9 or 10, and one other course
108.	The Philippine People....	3	Jr., sr., grad.	1 and 5
110.	Physical Anthropology....	3	Jr., sr., grad.	See statement
112.	The American Negro....	3	Jr., sr., grad.	1 or 3, 12 or 113
113.	The American People....	3	Jr., sr., grad.	1 or 3, and one other course
114.	The American People (continued) .....	3	Jr., sr., grad.	1 or 3, 113, and one other course
117.	Social Psychology.....	3	Jr., sr., grad.	See statement
119.	Modern Social Institutions	3	Jr., sr., grad.	1 or 3, 9 or 10, and one other course
121-122.	Seminar in Sociology....	3	Sr., grad.	For sr., four correlated courses
123.	Seminar in Anthropology.	3	Sr., grad.	For sr., four correlated courses

All of the above courses receive credit in the College of Education. For description, see bulletin of the College of Science, Literature, and the Arts, pages 111-114.

## INDEX

### GENERAL

	Pages
Absences .....	12
Admission .....	10-12
Afternoon classes for teachers .....	16
Agriculture, special certificate.....	13
Agricultural college campus, map .....	3
Agriculture, credits allowed.....	20
Appointment bureau, College of Education .....	16
Appointment bureau, state.....	17
Bachelor of Arts degree .....	13-14
Bachelor of arts with distinction .....	14
Blind, teachers of .....	23
Calendar .....	5-6
Campus, map of .....	2-3
Certificates .....	12
First grade professional .....	11, 13
Life .....	13
Required in Minnesota .....	12
Special .....	13, 22
State professional .....	16, 18
University teachers' .....	13, 19
Classes, arrangement .....	12
College of Education—Aim, estab- lishment, location .....	10
Conditions .....	12
Correspondence courses .....	16
Courses of study in education.....	18-33
Courses of study in other de- partments .....	34-72
Course of study, guidance .....	10-11, 18-19
Course of study, prescribed.....	19-20
Credit hours .....	13, 14
Defectives, teachers of .....	23
Departmental statements:	
Education .....	18-33
Other departments .....	34-72
Distinction, graduation with .....	14-15
Elementary teachers .....	23
Employment bureaus .....	16-17
Examinations, exclusion from.....	12
Extension courses .....	16
Faculty, register .....	7-9
Failures .....	12
Commercial training .....	13, 20, 41, 42
Fellowships (see teaching assist- ants) .....	15-16
General information .....	10-17
Graded school principals (see also short course) .....	18
Grades .....	12
Graduate scholars .....	9
Graduate students .....	18

	Pages
Graduate study .....	15-16
Graduation with distinction .....	14-15
High school rural training .....	22, 26, 32-33
Home economics .....	13, 20, 21, 53
Honor points .....	13, 14
Kindergarten training .....	23
Library course .....	21-22, 31-32
Manual training .....	13, 21, 30
Major (see also departmental statements) .....	14
Map of campus .....	2-3
Mental defectives, teachers of...	23
Minors (see also departmental statements) .....	14
Normal schools, agreements with .....	23
Normal school graduates..	11-12, 19-22
Practice teaching .....	19, 20, 28
Prescribed course of study.....	19-20
Principals, courses for .....	18
Program of studies .....	12, 14, 16, 18
Residence .....	14
Regular students .....	11
Rural training departments (see, High school training depart- ments)	
Saturday classes .....	16
Scholastic requirements .....	12
Short course, date of .....	6
Starred courses (see also, depart- mental statements) .....	24
State teachers' employment bureau .....	17
Students:	
Graduate .....	15, 16, 18
Normal school .....	11, 12, 19, 22
Regular .....	11
Unclassed .....	11, 18
Studies, selection of .....	18-19
Superintendents, courses for ...	18
Superintendents' short course...	6
Summer session .....	15, 16
Teacher high school training de- partments .....	22, 26, 32-33
Teacher librarians (sec, Library course)	
Teachers in service .....	16
Teaching assistants .....	15-16
Unclassed students .....	11, 18
Undergraduates, courses for....	18-19
University high school .....	10
University teachers certificates...	13, 19
Two-year .....	13
Life certificates .....	13

## COURSES AND DEPARTMENTAL STATEMENTS

EDUCATION	Pages
Departmental statements, Education	18-33
Administration	27
Agricultural education	20, 30
Auxiliary education	27
Curricula	27
Deaf, teachers of	23
Defectives, teachers of (see also auxiliary education)	23
Drawing (see also art)	13, 30, 41
Dumb, teachers of	23
Educational psychology	26
Elementary methods	29
Elementary teaching, problems of	27
Foreign schools	27
Commercial subjects	13, 20, 41, 42
Forge	31
History of education	26
High school training departments	22, 26, 32-33
Home economics	13, 20, 21, 53
Industrial education	28
Kindergarten training	23
Library course	21, 22, 31-32
Manual training	13, 21, 30
Mental defectives, teachers of	23
Methods	28-30
Methods, elementary	29
Method, Principles of (see also technique of teaching)	26
Moral education	28
Organization and administration	27
Pattern making	31
Practice teaching	20, 28
Prescribed course of study	19-20
Principles of education	26
Religious education	28
Research, methods in	27
Rural school curriculum	26
Sanitation and hygiene	27
School administration, course in	26-27
Shop	31
Social aspects of education	26
Supervision	27
Teachers' courses (see methods, see also departmental statements)	
Teachers high school training department	22, 26, 32-33

	Pages
Technique of teaching	26
Units and scales	27
Vocational education and guidance	27
Woodwork and wood turning	31
OTHER DEPARTMENTS	
Anatomy	54
Anthropology	71
Art	35
Astronomy	35
Bacteriology	36
Biology	34-35
Botany	37
Chemistry	38
Comparative philology	40
Descriptive geometry	41
Domestic science (see home economics)	
Drill	13
Economics	41-44
English	44-45
French (see romance languages)	
Geography (see also geology)	48
Geology	46
German	49-50
Greek	51
Gymnastics	13
History	51
Home economics	13, 20, 21, 53
Italian (see romance languages)	
Latin	55-56
Mathematics	57-58
Minerology	46
Music	58-59
Norwegian (see Scandinavian)	
Oratory (see public speaking)	
Philology	40
Philosophy	59
Physical education	13, 61-62
Physiology	54
Physics	63-64
Political science	65
Psychology (see also under Education)	26, 59
Psychology, prerequisite for all courses in Education	24
Public speaking	66
Rhetoric	66
Romance languages	68
Scandinavian	70
Sociology	71
Spanish (see romance languages)	
Swedish (see Scandinavian)	





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